Get this to the lab! An inside look at forensic 'fingerprints'

AUSTRALIAN



NG

REVIEWS

THE

ATA Pro 12 shotgun
22LR rifle comparison
GPO Spectra scope • Meopta binoculars
KRG Bravo stock • Decibullz Molded Ear Hooks



Starting out with thermal – first of a two-part special





November 2022 \$8.95 incl. GST

SHOOTERS



PRECISION PERFORMANCE

SPEIBERTS.

HASS

CPEIBEDIEII

5 S A CS



EPERIOTE

INSIDE NOVEMBER 2022

FIREARMS

- 26 Bravo! Howa KRG rifle a well-priced option, claims Daniel O'Dea
- **30 Consider this...** Con Kapralos offers five contenders in the .22 LR arena
- 60 Go with the Pro ATA's 12-gauge shotgun made Paul Miller a happy man

HUNTING

72 In at the deer end A sodden stalk ended with Aaron Carey taking a dip

PRODUCTS

- 56 Meopta binos
- 68 GPO's Spectra 4x riflescope
- 76 Decibullz molded ear hooks

AND MORE

- 18 Lifelong companion Almost seven decades on, John Hill still uses his first rifle
- 24 Life's great adventure John Frankham has shooting memories to warm the soul
- 34 Say squeeze! Don't snatch at the all-important shot, advises Sam Garo
- 38 The hunt for Billinghurst

44

50

40 Book Review Optical inclusion - Optics for the Hunter by John Barsness

> Get this to the lab! Senior correspondent Rod Pascoe takes an inside look at forensic 'fingerprints'

Art and soul John Dunn admires some insprirational works of wonder

64 The heat is on Matthew Godson looks at starting your thermal adventure

REGULARS

162

- 6 National News
- 7 Letters
- 7 Insurance
- 8 Open Season
- 10 Reloading
- 12 Clay Target Q&A
- 14 Top Shots
- 77 SSAA Shop
- 78 Competition News
- 81 Competitions
- 82 Jumbunna



Our November cover - see page 34

NEXT ISSUE

We wrap up our look at starting out with thermal optics as Matthew Godson takes to the field to put theory into practice. He took part in a SSAA Conservation and Wildlife Management pest control exercise in the south-east of South Australia and explains why thermal is a handy tool in that department.

Handloader Chris Redlich is obsessive about maximising accuracy and was suitably impressed by Sellier & Bellot Precision Rifle factory ammo, saying you can depend on it to perform accurately and consistently when every shot counts.

Going bush without being properly prepared is never a good idea and Thomas Tabor has been checking out the latest GPS tracking device from Bushnell, a miniature device that fits in the palm of your hand and might just be a lifesaver one day.











BERETTA

1

ENHANCE YOUR INSTINCT

20" 308 AND 300WM ARE NOW IN STOCK AND AVAILABLE

STRAIGHT PULL ACTIONS

- Very fast and instinctive linear reloading system
- Easy back and forward sliding movement, no rotation
- Bolt handle features 45° angle and ergonomics for perfect fast reloading
- Jam-free fast reloading cycles

FULLY AMBIDEXTROUS

- No tools required to swap bolt between left and right hand
- Easily swap ejection side independently of bolt handle

INTERCHANGEABLE BARRELS

- Barrel and calibre are interchangeable on the rifle – same rifle, different calibres
- Guaranteed 3 Sub-MOA accuracy, even after new assembly. Every barrel stays in the same position thanks to its bedding geometry
- Scope remains assembled on the barrel when changing calibre

USER ADJUSTABLE TRIGGER

- Trigger weight adjustable in 3 positions (from 1000g with 200/250g increase on each position). No tools required
- Single-stage
- Easily interchangeable

SIFA Shooting Industry Foundation Australia



\$2,599 RRP



DETACHABLE MAGAZINE

- 5 shot capacity for both standard & magnum calibres
- Sits flush with bottom profile of rifle
- Reload the magazine from the top without extracting the magazine



Track the BRX1



MEMBERSHIP AND MAGAZINE INQUIRIES Phone: 02 8805 3900

Fax: 02 9832 9377 PO Box 282, Plumpton, NSW 2761 Email: membership@ssaa.org.au

EDITORIAL POLICY To create a better environment and community understanding of all forms of hunting and shooting sports.

EDITORIAL INQUIRIES PO Box 2520, Unley, SA 5061 Email: edit@ssaa.org.au Web: ssaa.org.au ABN 95 050 209 688

212,130 members strong as of September 2022

This magazine is owned and published by the Sporting Shooters' Association of Australia Inc. Opinions expressed herein are those of the authors and do not necessarily reflect the policy of this Association.

EDITORIAL

MANAGING EDITOR	Allan Blane
ASSOCIATE EDITOR	
ASSISTANT EDITOR	Dave Rose
CHIEF OF STAFF	Jennifer Martens
ART DIRECTOR	Mike Barr
GRAPHIC DESIGNER	Alex Heptinstall
GRAPHIC DESIGNER	Natalie Kuhlmann
WEBMASTER	Mark Fieldhouse
ADVERTISING & PROMOTIONS	
MEDIA AND POLITICS OFFICER	Rachael Oxborrow
ADMINISTRATION	Debbie Wing
SENIOR CORRESPONDENT	
SENIOR CORRESPONDENT	·

CONTRIBUTORS THIS ISSUE

John Hill, Rod Pascoe, Sam Garro, Samuel B. Mann, John Frankham, Matthew Godson, Henri Lach, Aaron Carey, Paul Miller, Con Kapralos, Daniel O'Dea, Chris Redlich, Thomas Tabor, Barry Wilmot, Russel Mark.

STATE CONTACT INFORMATION

For SSA	A inquiries please contac	t your state office	
NSW	02 8889 0400	WA	08 9497 7919
QLD	07 3281 3447	SA	0419 849 452
VIC	03 8892 2777	ACT	0423 043 663
TAS	0418 734 008	NT	0402 013 918

NATIONAL CONTACT INFORMATION

SSAA National Chief Executive Officer and Chief Editor Tim Bannister Wildlife Programs Matthew Godson PO Box 2520, Unley, SA 5061 Phone: 08 8272 7100

SSAA National Accounts Office PO Box 282, Plumpton, NSW 2761 Phone: 02 8805 3900 Email: accounts@ssaa.org.au

SSAA General Insurance Brokers

Unit 1, 212 Glen Osmond Rd, Fullarton, SA 5063 Phone: 08 8332 0281 Freecall: 1800 808 608 Fax: 08 8332 0303 Email: insurance@ssaains.com.au

Please mail all correspondence for the SSAA National Executive to SSAA, PO Box 282, Plumpton, NSW 2761 Email: ssaa@ssaa.org.au



National News

Feather in the cap for two publications

ur highly acclaimed *Great Australian Outdoors* magazine and *Field to Fork - Second Helpings* cookbook have been announced as finalists in the 2021-22 Real Media Awards. The awards, run by industry group Real Media Collective, celebrate effectiveness, craft, creativity and innovation across a wide range of print, marketing and brand publications.

Being recognised as finalists among some of the most recognisable and successful publishers and brands in the country is a true honour yet this is not the first accolade for both *Great Australian Outdoors* and *Field to Fork - Second Helpings*, reinforcing the quality and merit of both publications. In 2019, *Great Australian Outdoors* was named winner of the 10th International Creative Media Awards Print Magazine category and also won an award for outstanding design and concept.

Field to Fork - Second Helpings was celebrated as one of the Best in World Meat Cookbook titles at the 27th Gourmand World Cookbook Awards earlier this year and its predecessor, Field to Fork - The Australian Game Cookbook, was recognised in 2012 in the Gourmand World Cookbook Awards as Best First Cookbook in Australia. We hope to be the bearers of good news by the time this magazine arrives in your mailboxes, with winners of the awards due to be announced on October 28.

Increased firearms and accessories protection is now on offer for members thanks



to SSAA General Insurance Brokers, an ideal option for those requiring more than the \$25,000 cover offered through the SSAA Mutual Members Firearm Protection. This new offering will allow you to cover up to \$125,000 of firearms and fixed accessories while at home, on the range, hunting or overseas for up to 28 days and there's also a new personal accident cover option available to firearms professionals. See page 42 for more information on these great insurance products.

As the end of another year and the festive season draws nearer, don't forget the SSAA Online Shop for your gifts this Christmas. The shop offers a wide array of items for camping, clothing, cooking and publications at great prices so that Christmas present for the shooter in your life could be sorted nice and early simply by visiting onlineshop.ssaa.org.au to browse your options.

Shooting reinstated for 2026 Victorian Commonwealth Games

n a positive note for our sport, target shooting has been confirmed as part of the Victorian 2026 Commonwealth Games with events to be held in Gippsland. SSAA National congratulates Shooting Australia and the ISSF on their initiative which pushed for its inclusion. Our Association was proud to support the social campaign

for the cause, reaching around 95,000 people online and more than 210,000 via *Australian Shooter*. With confirmation that Clay Target (Trap), 10m Air Pistol, 10m Air Rifle (small-bore) and Para Shooting will all be included, it'll be up to us as the shooting community to support the sport, attend these events and enjoy the buzz of competition.

SSAA - Protecting shooters since 1948

A load of old billhooks



ABOUT A YEAR ago I came across an old billhook among tools inherited from my late father and decided to give it a new lease of life. I ditched the old jury rigged handle and fitted a new one with a flouro band on the end, not as a wrist strap but to find it when I put it down. Then I put a decent edge on it with my linisher and oiled it up. I use it for clearing heliconia stems and the like.

Before and after use I check the edge which doesn't dull very quickly - this old steel really holds its sharpness. On closer inspection I noticed markings stamped into the blade which made me curious and on researching the 'William Swift guaranteed original' stamp, I found some fascinating reading on the many billhooks, forges, steels and charcoal of the past 150 years.

The lesson here is some of these old steels are well worth reusing, either as their original intent or, if not possible, for another purpose (see John Dunn's article 'From bunny trap to bunny skinner', Shooter, February 2022).

Chris Tuke, Qld



Jumbunna on the money

AFTER READING JOHN Dunn's Jumbunna columns for so long, I dropped several not-so-subtle hints to my wife that The Jumbunna Collection Volume II would be well received on my birthday and

thankfully she delivered. I've just finished reading John's musings, thoroughly enjoyed them and wanted to congratulate him on a wonderful read. I was particularly taken by the clarity of his observations and ability to convey those details to the reader - he certainly sees a lot more detail than I usually do.



John may curse me but I intend to lend the book to my younger brother who I introduced to shooting and hunting at the tender age of 11 after some spirited discussions with our mother who had her doubts. He took to it like a duck to water and now, more than 40 years later, has seen and done more than I have in my 75 years. He's also a long-standing SSAA member who I'm sure will get as much enjoyment from the book as I have. Thanks again John for a terrific read - more power to your pen!

 The Jumbunna Collection Volume II (\$35 incl. P&P) is available via email at footsteps5350@gmail.com or the SSAA Online Shop.

Keith M. Falk, via email

Black market woes

GREAT TO SEE a couple of good articles on shooting muzzleloading firearms in our May 2022 edition. But we shooters need supplies of black powder to feed our muzzleloaders as there's been a black powder drought across Australia for about five years. Please can someone re-commence importing and distributing supplies of Swiss or WANO black powder? Albury/Wodonga gunshop staff just laugh when asked for black powder.

Ian Guthrie, via email

suranc<u>e Q&</u> SSAA GENERAL INSURANCE BROKERS



Send questions to: insurance@ssaains.com.au

I dropped my laptop and broke it while away from home and am considering whether it's worth making a claim on our home and contents insurance. We have extra accidental cover on our home and contents for this reason but by the time I pay my excess I could just buy a new laptop and avoid the risk of our premium going up. Is it worth making a claim at all?

This is an age-old debate in our busi-A ness but ask yourself this: Why are you paying for insurance if you're not going to use it? While there's a small risk of your premium being adjusted when you make a claim, this is only one of several reasons an insurer adjusts premiums including claim history, inflation, natural disasters and global events so considering your claim history is just one of many, there's likely a

small risk of you experiencing a premium increase.

Receiving a renewal notice of a higher premium in the future may prompt you to go searching for alternative policies so it's important to regularly review and renew your insurances and SSAA Insurance Brokers are well positioned to guide you through this process. Visit ssaaib.com.au or call 08 8332 0281 for more information.



The advice offered in this column is of a general nature and does not allow for individual situations. SSAAIB recommends that you obtain professional advice before proceeding with any insurance investment. SSAAIB accepts no liability for any actions by an individual to change their insurance plans without seeking professional advice.



Thumbs-up from me for the new Tasmania Deer Strategy

he Tasmanian Government has delivered on its commitment to modernise management of the fallow deer population with release of the Implementation Strategy for the Tasmanian Wild Fallow Deer Management Plan. This plan unlike others keeps hunters in mind and will allow us to be part of the solution to prevent the spread of wild deer into areas we don't want them to become established.

The Implementation Strategy sets out clear objectives to manage the agricultural, commercial, environmental and public safety impacts associated with deer populations in Tasmania and underpins the Tasmanian Wild Fallow Deer Management Plan released earlier this year. Refusing to be caught up in the 'greenwash' anti-hunting debates of the mainland, the Management Plan and Implementation Strategy both recognise the balance between supporting recreational hunting while giving landholders flexibility to manage deer on their land and minimise the impact of wild deer in the state.

By undertaking extensive stakeholder engagement with key associations and peak bodies, the government developed a Management Plan and Implementation Strategy which ensures a balanced and supported framework. Through a collaborative approach the government believes they're setting this project up for success over the cries of the Bob Brown Foundation's (BBF) anti-hunting stance and Gun Control Australia's Rowland Browne opposition to anything related to positive gun use. BBF patron Christine Milne has been vocal in the media rejecting the government's proposed role of recreational hunters undertaking volunteer ground shooting in addition to aerial culling programs, while Rowland Browne has his knickers in a knot that such volunteer efforts by hunters in partnership with the government is promoting a gun culture the 1996 National Firearms Agreement was meant to prevent in his opinion.

While delivery of the Implementation Strategy will be overseen by the Department of Natural Resources and Environment Tasmania, there are a range of actions or initiatives where the government envisages industry groups playing a vital role with their input and involvement in delivery of key actions. For farmers this includes identifying strategies and initiatives to support the deer farming industry, property-based game management plans and supporting industry regulation for commercial deer farming. For hunters it offers opportunities to increase the involvement of recreational shooters in control programs on public land, along with the establishment of partnership and project agreements with key stakeholder groups.

The plan establishes clear goals and management objectives for wild deer over the next five years and sets out four contemporary objectives to manage commercial, environmental and public safety impacts associated with wild deer populations. The management objectives are 1: Effectively manage impact of wild deer throughout the state while maintaining a traditional and sustainable hunting resource. 2: Empower farmers, foresters and other land managers to directly manage deer and work collaboratively with hunters to achieve tailored management objectives. 3: Continue to provide evidence-based deer management. 4: Improve community involvement, education and awareness of deer management.

The government recognises the actions within the Implementation Strategy cannot be achieved alone as working in partnership with various stakeholders is key to better management of wild deer in Tasmania, therefore it's proposed specialist working groups will be established to support delivery of some actions within the Strategy. Membership of these working groups is designed to ensure appropriate skills across government, land managers (private and public), hunters, community and researchers are present.

From what I've seen so far this management plan is one of the better offerings from a state government as it involves all key stakeholders and proposes realistic objectives with monitoring, evaluation and reporting of performance.

> Send questions to: wildlife@ssaa.org.au



CENS Digital custom electronic hearing protection. Amplifies the sounds around you and cuts off when sound is detected above 81dB then sound returns when it's clear & safe. Up to 5 different modes for all disciplines of shooting plus wireless communications.



True Class 5 Hearing Protection

Agents throughout Australia & New Zealand

Ph: (07) 3820 2533 - Email: info@earmold.com.au

True custom made shooters hearing protection. Custom made on the spot & ready the same day. Ultimate in comfort & highest rated protection with up to 40.5dB reduction at 4000Hz. Removes background noise & the crack from the shot while still having situational

awareness.



Bushnell

- Range out to one mile with +/- one yard accuracy
- ACTIVSYNC™ display allows you to see in low-light and day-bright lighting conditions .
- High-definition optical system for clarity and low-light performance in the field
- Near/far ranging modes with bow and rifle ballistic modes .
- IPX7 waterproof and fog proof construction
- See clearly in any weather condition with EXO[™] barrier lens protection
- Backed by the lifetime ironclad warranty





ACTIVSYNC[™] display automatically changes from black to red



www.nioa.com.au | www.bushnell.com

Do the twist . . . the origins of barrel rifling

part from shotguns, modern firearm barrels are rifled but what does the term 'rifled' actually mean? The earliest firearms had smooth barrels and used relatively large diameter and ill-fitting lead projectiles, so when fired the projectile rattled its way down the barrel before exiting with its final direction being highly unpredictable. This was fine when the infantry used mass musket fire to bring down the enemy at close range but as time progressed, aimed discretionary fire by individual soldiers became the more common type of warfare and so more accurate firearms were required.

The origin of 'rifling' or cutting grooves in the barrel is unknown although archers had long known that twisting the tail feathers of an arrow gave greater accuracy so this may have been the starting point for this practice. This rifling imparts a spin on the projectile which serves to gyroscopically stabilise it and in turn improve stability and long-range accuracy.

Although rifling dates from about the mid-15th century the precision machining required to perform this operation was not universally available until much later. It was recorded that in the Napoleonic Wars the British had several experimental units known as 'rifles' and used a Baker flintlock .625" calibre which proved very effective against the enemy during the Peninsular War in Spain and Portugal due to its accuracy and long-range striking ability.

Many other experimental firearm and rifling designs evolved during this time



using different shapes and degrees of spiralling in the barrel, one of them being the Whitworth percussion calibre .451" rifle which was created with a special barrel featuring a twisted polygonal-shaped bore. It also used a specially designed projectile which matched the barrel to impart spin on the projectile, though unfortunately they were very expensive to produce so not many were made and nowadays both the rifles and projectiles are collectors' items.

Today rifled barrels are the norm and there are several systems employed. Firstly there's the original method of cutting one groove at a time using a machine tool, a process called cut rifling which can be time consuming as some barrels have eight or more grooves to be cut. The next is called broached rifling where all the grooves are cut in one pass using a special progressive broaching bit and this is a quicker and more efficient machining method.

Then there's button rifling which involves pushing or pulling a tool called a 'button' down the barrel and this is another method currently in use. Forging the barrel over a mandrel which has a reverse image of the rifling is another method (hammer forging) and finally we have flow-forming the barrel over a mandrel containing a reverse image of the rifling.

These grooves are the spaces cut out in the bore and the resulting ridges are called lands. Both the grooves and lands can vary in number, depth, shape, direction of twist (clockwise or anti-clockwise) and rate of twist, the latter calculated by measuring the length in inches it takes for the bullet to rotate one full turn (360 degrees) in the barrel. In the original muzzleloading rifles using lead projectiles this was about one turn in 48 inches, designated 1:48, whereas in modern centrefire small diameter firearms like a .223" the twist may be one in eight inches (1:8). When handloading ammunition it's handy to know the twist rate though it's not normally stamped on the barrel by the manufacturer, so consult a reliable reloading manual to find the barrel twist appropriate for any given cartridge being used.







TRACKER



NEW



Featuring the newly designed Australian RX reticle. Rapid cross for quick aiming on moving targets.



AVAILABLE NOW!



WATER

PROOF











(HD)



3 - 1 8 X 5 O

ILLUMINATED

5 - 3 O X 5 6

VARMINATOR





\$599 SRP

\$479 SRP

REACHER 4.5-27X50

ILLUMINATED







huntingdepot.com.au





Clay Target Q&A WITH RUSSELL MARK

I'm a right-eye dominant shooter who also has right-handiness and my youngest son who's developed a great interest in busting clay targets is also right-handed in every sport he's tried. The issue I have is he's left-eye dominant so I'd appreciate some advice as to whether I let him keep shooting off his right shoulder and just close his left eye or do I buy him a lefthanded shotgun and have him learn with both eyes open?

Harold Campbell, Vic.

A This has been a popular question over the years Harold but one worth addressing again though as always, my answer will remain the same. Your son isn't unique as about 28 per cent of the human population are just like him right-handed yet left-eye dominant. For the vast majority of sports this isn't an issue but for shotgun shooting it most certainly is.

If this was my son and he was entirely new to the sport I'd give him a chance to try shooting from his left shoulder with both eyes open (my father always said "if God gave me three eves I'd use all three"). The advantages for your son if he can master this issue far outweigh the frustration he may face at the beginning, as there are so many situations in shotgun shooting where two good eyes working together and providing wide use of your peripheral vision will be advantageous. For example holding above the trap house in Trap, starting further down the target flight line in Skeet or on target in Sporting where sharp-angled, quick instinctual fast shots must be taken

or simply in the field when walking behind your dog while shooting quail are all better done with two eyes wide open and working together.

Give your son a few sessions shooting very straightforward targets standing directly behind a clay target thrower (Station 7 on a Skeet range is ideal) and gradually make the targets harder as his confidence grows. It's important to be patient and please don't invite the local club 'experts' or a group of friends to watch him as he tries to make the transition from right shoulder to left. It can be very frustrating and soul-destroying at first but more often than not something will just 'click' and his eyes will all of a sudden move from incorrectly focusing on the end of the barrel to be locked only on the target where they belong. A spectator gallery offering advice after every shot is most definitely not encouraged at this point.

If after a reasonable amount of time your boy finds he just can't master the fundamentals of operating a shotgun from his left shoulder then you'll have no choice but to let him shoot from his right shoulder. Some people are so strongly 'right-handed' that even though their left eye is their master eye they still have no option but to shoot that way. I'm one of those people who can't do anything left-handed - nothing - though luckily I'm also right-eye dominant.

If ultimately he's forced to shoot righthanded then I strongly advise you buy him a pair of shooting glasses with clear lenses but preferably interchangeable ones so he can use darker colours on bright days. Place a small piece of smudged sticky tape over the optical centre of the left lens to block out the centre of his left eye which will force him to shoot only with his right eye (the optical centre is best found after he's mounted the gun to his shoulder). After ensuring the firearm is unloaded and safe, look down the barrel and cover his left eye lens with a one-centimetre piece of tape as this will allow him to keep both eyes wide open while shooting.

The reason I encourage the use of glasses is not just for safety but to negate the issue that many people who are forced to close one eye squint badly with their 'good' eye and in shotgunning this is one of the worst habits you can develop. The wider you can have your eyes open the better as more light entering your eyes results in greater target acquisition which equates to better scores. If you're already losing the ability to use your master eye then please don't half shut the other one!

In saying all that there have been plenty of great competitors down the years who've found substantial success shooting with the use of just one eye so try your son shooting from the left shoulder first and if that's not possible then try the technique outlined above. All the best to your boy Harold, though unfortunately for you if he can master two eyes open you'll be buying him a left-handed shotgun for Christmas!

Questions to: Russell@GoShooting.com.au









Strong, Reliable, Safe and Secure.

Check out our new safe range that will not only meet your safety and security expectations but also the requirements of your state regulations. There is a range of storage options to choose from including safes that have been designed specifically for category C and H firearms.



Winchester 8 Gun Safe 360 W x 1500 H x 360 D 50kg

RRP \$550

Winchester 12 Gun Safe 520 W x 1500 H x 365 D 66kg

RRP \$645

Winchester 25 Gun Safe 1000 W x 1500 H x 550 D 157kg

RRP \$1095

f) 🕑 🕩

Winchester Pistol Gun Safe 380 W x 300 H x 300 D 34kg

RRP \$345

Winchester Cat C 8 Gun Safe 360 W x 1500 H x 360 D 78.5kg

RRP \$695







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

Got a question - ask our

Hŧ

Q I have a .30-06 Mauser carbine inscribed 'Fab. Nat. D'Armes de Guerre, Herstal Belgique' with an inscription on top of the breech and wonder if you can tell me anything about it please? Ray, via email

MPS

This is a nice example of a Colombian military carbine and if you Google search 'Colombian military rifles' you'll find lots of information. There were two models made. The first in 7mm was later re-barrelled to .30 calibre from what I can gather but I reckon yours is a factory-made FN Model 1950 Colombian short rifle produced originally in .30-06. The bolt handle on your rifle would originally have stuck straight out at 90 degrees but has been bent downwards at some point in keeping with more modern fashions. The inscription 'Colombia Fuerzes Militares' translates to Colombian Military Forces. **Geoff Smith**





Q I have a CZ 557 in .243 Winchester and a Brno Fox Model 2 in .22 Hornet, the latter glass bedded. What I'd like to know if possible is the torque weight of the action screws of these two rifles and, if I have this information, can I make the adjustment myself or would you recommend it be done by a gunsmith? I feel it's important to get this right.

• Rod Pascoe

Jeff Kinnear, via email

A The standard dictum for tightening actions screws has always been the same - do them up firmly and evenly. With slot-head screws the driver blade must fit the slot closely and the same applies to Phillips-head and Allen-head screws, taking care not to overtighten and damage the heads or even strip the threads. Properlyused Allen keys can provide remarkably consistent pressure but care needs to be taken not to compress the stock wood or perhaps crack the bedding compound. Never fit an extension to the long end of a key to increase leverage.

I spoke to Robert Tobler of RDT products who suggested torque pressure of around 45 inch/pounds was appropriate for woodenstocked rifles and 55-70 inch/pounds for firearms with aluminium bedding blocks. You obviously understand the importance of tight action screws for consistent accuracy and checking them should be a regular part of your cleaning and rifle maintenance routine, as is checking scope-mount screws. Hope this meets your requirements. John Dunn

Q Given the ongoing problems surrounding powder supply in Australia, I'm interested to know what alternatives there might be for reloading .310 Cadet rounds. I'd hazard a guess and say they're possibly similar to that for .38 Special or .357 Magnum. I've looked at some suggested alternatives in shooting forums where there are even some people who propose mixing powders for better ignition and performance. Looking at suitable comparable powders on the ADI comparison chart is one thing but actual availability of these is another matter entirely. Any information in regard to this would be greatly appreciated as I'm trying to help a friend who wants to do more shooting and I'm providing the reloading part of it as I already reload for .308. **Ben Talman, via email**

email: edit@ssaa.org.au

A Yes Ben we really do have a powder problem in Australia at the present time. I wouldn't recommend mixing different powders as a solution but here are a few loads for the .310 cartridge using a 120-grain projectile - ADI AR 2205 powder with 7.0gr start and 9.0gr maximum; Hercules 2400 powder with 6.0gr start and 8.0gr maximum; IMR 4227 powder with 8.5gr start and 10.0 gr maximum. Because powder is in such short supply you'll probably have to ring around to several gun stores to locate any of these. **Barry Wilmot**

Q I'm considering buying a .30-06 rifle for general hunting in Queensland. A couple of my mates say this is too much gun for rabbits and foxes or goats and pigs though I think I might also like to go deer hunting. Are my mates on the right track or would this cartridge cover all bases? Shane, Qld

A The .30-06 Springfield is one of the most famous cartridges in the world and started life as a military round but was soon used for hunting in the US where it was originally developed (30-cal 1906) and is now incredibly popular and as a 'do-all' sporting cartridge it just about covers every base. It's way too powerful for rabbits or foxes and not really enough for the average shooter chasing Top End buffaloes but for everything in between here in Australia, with careful bullet selection it will do a superb job.



There's always been competition between shooters who love the .30-06 Springfield and its offspring the .270 Winchester and both are fine cartridges, yet I've always found the .30-06 more pleasant to shoot though both generate similar recoil. For the game you mention many people have two rifles chambered in something like the .223 Reminton and .308 Winchester. The lighter .223 recoils a lot less and is better suited to shooting lighter-framed small game, while the .308 or slightly more powerful .30-06 are ideal for pigs, goats and all species of deer in Australia and with the right choice of bullet construction and weight for larger species right up to sambar deer in Victoria and now New South Wales. The .30-06 would be a great choice for the large-bodied red deer you have in Queensland.

I remember reading an amusing article about the .30-06 where the author said he was aware of a group of shooters in the Orange area of NSW who insisted on all their mates using a 'thirty-ought-six' when spotlighting - no .30-06, no membership of the group! Now they sound like my kind of shooting nuts. I've never used mine under the spotlight but I guess you could make the argument that any practice is good practice so long as you're not putting your shoulder out or creating a trigger flinch on all those rascally rabbits. Good luck if you buy that .30-06 and learn to shoot it well you won't regret it.

Paul Miller

Q You may have covered this previously but the laws are changing so rapidly. I want to take firearms with me when we begin traveling around Australia and looking to be a lawful gun owner I'd like to know the procedure on from moving state to state and even city to city. And how would I go about staying in a motel with firearms? I don't have cargo drawers or such in my vehicle as it's just a small SUV. Any advice much appreciated.

Stephen M., via email

A It's a good idea to do your homework before you travel as each state and territory has its own Firearms Act and Regulations and, although they differ slightly, they all have a similar underlying theme which is: 'You'll be charged with an offence (breach of the Act) if you allow your firearm to be lost or stolen and/or it comes into the possession of an unlicensed person' or words to that effect. As you haven't specified the jurisdictions you'll be visiting, I'm afraid you'll have to do an online search for the regulations of each state and territory you're visiting.

You'll find some states cover safe storage and transportation of firearms well and have detailed fact sheets on the subject while others are somewhat vague and open to interpretation. The Northern Territory for example refer to motorhomes and caravans specifically while other states don't cover the transportation of firearms separately from safe storage requirements. I suggest contacting the state or territory firearms branch or registry to seek clarification. Your question of keeping firearms in a motel room is again something about which you need to seek further information.

There are several lawyers who've a good handle on the rules and deal in firearmsrelated matters, some of whom advertise in this magazine. I've found them to be a good source of information, straight-talking and can cut through the rules and regulations minefield. To cover all eventualities (and for peace of mind) a strong, locked container chained or wired to your SUV is essential and render your firearms temporarily inoperable with a trigger lock or some other recommended means. I'd do this as a minimum and while it may be overkill under your home state's rules, it at least demonstrates you've made an attempt to do the right thing when you hit the road. **Rod Pascoe**







EOTECH 512.A65 Holographic Weapon Sight 68 MOA ring with 1 MOA dot

SPECIAL \$790



EOTECH 518.A65 Holographic Weapon Sight 68 MOA ring with I MOA dot with QD mount NEW \$999



EOTECH

552.A65 Holographic Weapon Sight 68 MOA ring with 1 MOA dot with QD mount & night vision compatible **NEW \$1049**



EOTECH

552.XR308 Holographic Weapons Sight Ballistic reticle for 308win night nision compatible **NEW \$1199**



EOTECH XPS2-0TAN Holographic Weapon Sight 68 MOA ring with I MOA dot FDE full finish **NEW \$1075**

еотесн

XPS2-0GRN Holographic Weapon Sight 68 MOA ring with I MOA dot, green reticle **NEW \$1199**

27 Beaconsfield St, Margate, Qld 4019 Ph: 07 3883 1733 Fax: 07 3284 6611 Mobile: 0419 644 269 www.cleaverfirearms.com



MDT ORYX Chassis Chassis system, OD green, includes pistol grip & buttstock

Right hand available in: Remington 700 SA, 700 LA Remington Model 7 & 783 Tikka T3X SA & LA Howa 1500 SA & LA Howa Mini Action Ruger American SA Savage Axis SA & LA Savage 10/110 SA & LA Thompson Compass Mossberg Patriot SA & LA Mossberg MVP SA & LA CZ 455 & 457 Ruger 10/22 22lr Savage MKII Tikka TIX NEW \$529.95

Left hand available in: Remington SA Tikka T3X SA Savage 10/110 SA **NEW \$529.95**

MDT Bolt Knob



Available in: black, FDE, grey & MDT green Available for: Howa 1500, Remington 700, Tikka T3X, Ruger American, Savage & Threaded

NEW \$34.95

MDT

ORYX skin set Available in: black, FDE & grey NEW \$44.95

MDT

Polymetal Magazine ACIS pattern, 308win/6.5 Creed 10 shot, black or FDE NEW \$59.95





EOTECH Vudu 1-6x24 FFP Illuminated reticle, 30mm tube NEW \$1949

EOTECH Vudu 1-8x24 SFP Illuminated reticle, 30mm tube NEW \$1995

EOTECH Vudu 3.5-18x50 FFP Illuminated reticle, 34mm tube **NEW FROM \$2549**

EOTECH Vudu 3.5-18x50 SFP Illuminated reticle, 34mm tube NEW \$2249

EOTECH Vudu 5-25x50 FFP Illuminated reticle, 344mm tube **NEW FROM \$2995**





TRADITIONS Kentucky 50cal Percssuion black powder with brass fittings & set triggers **NEW \$890**

TRADITIONS Hawken 50cal Percussion black powder with brass fittings & set triggers **NEW \$890**

TRADITIONS Kentucky Pistol 50cal, percussion black powder **NEW \$549**

TRADITIONS Trapper 50cal Percussion black powder with brass fittings & set triggers **NEW \$590**

CIMARRON FIREARMS Co

CIMARRON 1875 Outlaw 45 long Colt, 6 shot, 7 1.2" Bbl, nickel finish NEW \$1295

> CIMARRON 1875 Outlaw 357mag, 6 shot, 7 1/2" Bbl, blued finish **NEW \$1095**

CIMARRON 1866 Yellowboy 38 spec 10 shot, 20" barrel, walnut stock **NEW \$2190**

CIMARRON 1894 Deluxe 30-30 8 shot, 26" octagonal barrel, deluxe walnut stock & forend **NEW \$2795**



GLOCK 40 Hunter MOS Gen 4 Long Slide 10mm, 10 shot, cased with two mags, 153mm barrel, slide cut for red dot NEW \$1490





SIG SAUER MI7 Civilian 9mm, 10 shot, cased with two mags, full FDE finish, night sights, with manual safety **NEW \$1449**

SIG SAUER **P320 X TEN** 10mm, 10 shot, cased with two mags, nitron finish, night sights NEW \$1849

120mm threaded stainless barrel, NEW \$1599

GLOCK 45 Corssover 9mm, two mags, cased front cocking serrations, 120mm threaded stainless barrel **STD NEW \$1499** MOS Slide Cut For Red Dot

NEW \$1599 GLOCK 19 Generation 5 9mm, two mags, cased

front cocking serrations, 120mm threaded stainless barrel **STD NEW \$1390** MOS Slide Cut For Red Dot NEW \$1490

SIG SAUER **P320 MAX** 9mm, 10 shot, cased with two mags, 5" match barrel, with Romeo max 3, 6 MOA red dot Sight **NEW \$3190**



MIROKU MK70 Game Gun Sporter 12 gauge, 30" barrels, ejectors, 3x invector chokes SPECIAL NEW \$1590

cleaverfirearms.com \$\$\$ Monthly Prizes !!! See The Specials First & Subscribe Today EXCLUSIVE WEB DEALS !!!

GLOCK

41 Generation 4 Long Slide 45acp, 10 shot, cased, two mags **STD NEW \$1299** MOS Slide Cut For Red Dot **NEW \$1399**

GLOCK 19X Crossover 9mm, FDE finish, two mags, night sights, lanyard loop

companion

Almost seven decades on, John Hill still uses his first rifle A few Golden City trophies from John's smallbore days, the one in the centre from the Kyneton Smallbore Club.

or my 18th birthday my older brother gave me a new 10-shot Lithgow Model 12 rimfire rifle and at time of writing that was 67 years ago. I still have it and use it regularly but not as often as when it was my only rifle. The old Lithgow has taken many rabbits and a few foxes but was a dismal failure on feral pigs as back in the mid-1950s there were no telescopic sights to be had in any of the country gunshops I frequented and shooters had little choice than to use the open sights fitted to rifles of that era.

At time of writing the Lithgow rifle is 67 years old.

The open sights on my first rifle weren't particularly accurate and resulted in a few misses and misplaced shots at ranges out to about 90m. Back then I'd pin a target to a large gum tree, measure 100 paces, jack-up the back sight a couple of notches on the elevation ladder then fire a 10-shot group from the prone position. But the target looked as though a shotgun had been patterned on it with bullet holes everywhere and the result couldn't be called a group by any stretch of the imagination.

My father suggested I try a peep sight as he'd used peep or aperture sights and reckoned they were an improvement on open sights. Big bore rifle shooters used aperture sights back then and shot distances measured in hundreds of yards so an aperture sight could be worth trying. When I mentioned it to the guy behind the gunshop counter he produced an optional sight for Lithgow Model 12s and this neat little unit would fit straight on to my rifle which was already drilled and tapped.

The sight came complete with mounting screws and two screw-in apertures, one larger than the other and once firmly attached to the receiver all that remained was to align it to the existing open sights, remove the back open sight and from then on a different form of sighting was ready for me to experiment with. The rifle was sighted-in to be about 12mm high at 25 paces and my shooting improved dramatically.

The aperture sight could even be used for spotlighting as by removing the screwin peep the threaded hole it screwed into provided a large enough aperture. I put my new sight to the ultimate test one night at the Golden City Smallbore Rifle Club in Bendigo and surprisingly shot 91 followed by 99 in my first attempt at smallbore shooting. Using the sporting peep sight and standard Lithgow bead fore sight the rifle was aimed at 6 o'clock on the targets, bullets striking a bit below the 10 ring

HIGH QUALITY, FUNCTIONAL, AUTHENTIC VEHICLE ACCESSORIES

டு



COURON CODE: SSAA15

IDFITTER CONTRACT

Lifelong companion

though a few clipped the edge which still counts as a maximum. Even so, 91 was an unbeatable score when all new shooters were given a handicap of 25 and in the second round the fore sight was aimed further into the black, resulting in nine out of 10 bullseyes.

It was a memorable occasion, I left with a Golden City badged teaspoon as a trophy and became enthusiastic about smallbore shooting though it was at least six months before another 99 was shot. One interesting aspect of the Golden City Rifle Club in the mid-1950s was almost every member used a Lithgow Model 12 rifle. These Aussiemade guns were fitted with Central number four 'click' adjustable aperture sights but also had Parker-Hale multi-element, targettype tunnel fore sights with interchangeable elements and a selection of rings, posts and beads to choose from.

When I joined the smallbore club, Golden City shot twice weekly at night and the club used ICI 'Civic' high-velocity ammunition in red and black packets. The 10 ring on a standard 25-yard target was five-sixteenths of an inch (about 8mm) in diameter and a gauge in bull on one side to a gauge in bull on the other was about two Minutes of Angle (the original Golden City range at Junortoun went back to 100 yards which sorted out the men from the boys).

Readers may ask: Why did so many target shooters use Lithgow Model 12 rifles? Perhaps the main reason was in those early



post-war years, smallbore target rifles weren't readily available and if so they were expensive. There was only one such target rifle in the club at that time and its owner didn't shoot any better than anyone else. The Lithgows were chosen because of the quality of their barrels which were slightly heavier than most other sporting rifles and they also had a short firing pin movement (short lock time), a desirable asset.

At one point I had two Lithgow Model 12s, my original with the sporting peep



sight (my bush rifle) and another set up for smallbore target shooting. That one had the Central aperture sight and Parker-Hale tunnel fore sight and had lead added to the stock for additional weight. But as time progressed BSA, Anschutz, Sportco and other makes of target rifle gradually became available along with more suitable standard velocity ammunition. From that point the scoring rings on targets were reduced in size (and scored outwards) and Lithgows became less competitive as target rifles so I sold my 'target' rifle and went to live in Melbourne, taking the original peep-sighted Lithgow with me.

One night I visited Northcote Smallbore Rifle Club with that trusty Lithgow and while some suggested one of the club rifles, I wanted to use my own. The club ran four targets at 25 yards and I checked mine through the spotting scope that was set up - one sighting target and 10 scoring targets and I was ready to go. The first sighting shot was a dead centre bull as was the second so, delighted with that result, I went around the card firing nine consecutive bullseyes, many of them centrals. Yet when I fired the 10th and final shot there was no bullet hole in the target until the guy next to me fired and there it was another central bull. I'd been firing at my target while watching my neighbour shoot his and when I moved the spotting scope to my target . . . let's not go there!

They were right, I should've used a club rifle. The only consolation was all my shots were in the black (it scored in the high 70s) and if the targets had been rabbits' heads they'd all be dead. So I decided to do a few repairs to my old Lithgow and had the



PRICES SUBJECT TO CHANGE

Lifelong companion

rifle re-blued, bought a new stock, fitted a side mount, invested in a telescopic sight and a full restoration was planned. It was a novelty to have a scope on that Lithgow and I gave the rabbits hell for a while though the side mount was far too high for the comb of the stock which needed to be raised.

About 10 years later the rifle was given a further makeover with the barrel shortened, its third stock prepared complete with comb insert and chequering, an extra bedding screw added to hold down the rear end of the receiver and an attempt made to mount a scope without a side mount. The rifle's excessive headspace was also on the list of improvements and this was achieved by fitting a thin spacing washer between the bolt handle sleeve and main bolt body. All modifications were successful and my Lithgow is almost totally unrecognisable as a 1950s rifle.

A recent test with different brands of high-velocity hunting ammo revealed not all cartridges shoot tight groups but one particular brand really stood out - Eley high-velocity hollow-points. There's a new version of this cartridge which shoots about 10mm higher than my ammunition and this Eley even looks different in that it's all black, contrasting with the old ammo which

has a brass case. High-velocity hollow-point ammunition should be used for any form of small-game hunting.

With compatible ammo my Lithgow still throws its bullets into neat groups at 50m, not bad for a 67-year-old rifle and a half-blind ageing shooter behind the butt. So until it's finally worn out I see no point buying a replacement as for an old bloke like me, the new Lithgow is too heavy to carry around the bush and my lighter original will do just fine. Anyway, it was a present from my late brother and has great sentimental value. I've owned this rifle most of my life and while it has undergone many transformations, it has served me well and continues to do so. •





The Central sight needs a special mounting plate so it can be fitted to a rifle.





SPIKA CHALLENGER

STICKER

L: 356mm W: 70mm HRC: 57-59

DROP POINT L: 203mm W: 37mm HRC: 58-60 T AUS-8

GUT

HOOK L: 203mm

W: 37mm HRC: 58-60

Large Folder L: 192mm W: 34mm HRC: 58-60 T AUS-8



State of the state





SMALL FOLDER

L: 132mm W: 23mm HRC: 58-60





85M

SPIKA



🞯 🕨 @SPIKA.TEAM 🛛 🛛 KNIVES.SPIKA.COM.AU

f





John Frankham has shooting memories to warm the soul



Memories are made of this: Three old-timers.

n re-reading an article in the May 2020 edition of *Australian Shooter*, fellow SSAA member Henri Lach lamented the fact that health reasons and other factors had forced him to assess his future hunting needs and ability to contribute to his mates' excursions which led to him selling a Brno Model 2 he was obviously fond of and had great memories of times in the field with.

I pondered how he'd feel parting with it as I also have one of comparable vintage, albeit topped with a suitably powered scope and reading Henri's article gave me a jolt as I'm probably approaching similar circumstances more rapidly than I'd like. My journey began when I was born to a farming family on the far north coast of New South Wales in the late 1940s to a dad who was almost 50 and had farmed all his life. It was from him I learned about firearms and the harsh realities of animal husbandry amid life on the land in general.

He used firearms to put down injured or diseased stock - never pleasant nor financially rewarding - and to control vermin and predators of which there were plenty. But as with many others of our kind, shooting helped put food on the table from the game which seemed abundant including the humble rabbit, pacific black ducks, teal and wood ducks to name just a few.

After World War Two there wasn't the choice of firearms for shooters which abounds on today's market and although restricted in some areas, my dad's collection consisted of a Lithgow 1A 22LR single-shot along with a Webley & Scott 12-gauge shotgun with which he rarely missed. I vaguely recall he had a neat Model 92 Win in 32-20 but this was seldom used as he considered it 'too much gun' and there were also some ex-surpluses or otherwise 303 and 310s about though they weren't favoured either.

And so it was my mates and I made do with what our dads would let us have and prior to my teens I vividly remember being with several school pals, pressing our noses against the window of a major store and drooling over a Sako Vixen in 222 Rem. It had a price tag in big red letters of \$50 which may as well have been \$5000 - if only we could've bought three of them back then!

Anyway, school came and went then like most of my contemporaries it was time to leave our small town for places farther afield in search of fame and fortune. In my case it was Brisbane where I served an apprenticeship as a boilermaker, met a lovely lady and embarked upon married life. The country life and shooting looked gone forever until we ended up settling in a semi-rural area on the northern outskirts which at that time comprised mostly farms. So with the help and guidance of some 'oldtimers' the shooting bug bit again which meant I was back into foxes, hares and the odd chestnut teal on the swamps at dusk.

Along with this I found time with those old boys to shoot clay targets DTL, at least until our family came along. I had several pump-action 12-gauge guns pass through my hands before finally a S56E Beretta ended up becoming more of a field gun due to its stock being shaved. I briefly owned a Grade F Miroku but my wife put her foot down so the clays and Miroku were gone.

As time went by my work in earthmoving maintenance took me to some interesting places where I met kindred souls who remain so to this day. We hunted pigs, foxes, rabbits and ducks around Glen Inness, Tenterfield and Wallangarra in NSW as well as Meandarra, Tara and throughout the Brisbane Valley in Queensland where the guns which came and went included a Model 94 30-30, several Model 70s in 243 Win along with the Anschutz 520 22LR.

Now I find myself still the proud owner of a 1973 S56E over-and-under and 83 Model Brno 2 and while I never did manage to own a Sako Vixen 222 Rem, I did land a rather nice Brno Fox 2 in 222 Rem I found in mint condition and on retirement I picked up myself with a lovely 243 Win Hunter Stainless to tackle wild dogs in South Burnett.

Some will ask: Why am I crowing about them? Well I'd say to them that when I was 10 years old my wildest dreams would never have included two slick Tikkas, a Brno Model 2 and more so I know how Henri must've felt when the time came to part with his firearms. I hold mine, close my eyes and memories come flooding back of better, younger, healthier times in wonderful places with great mates. I've now jumped in and added them along with all their paraphernalia to my will, so with a bit of luck should never have to sell them.

SAUER100. STAINLESS

OUTDOOR DURABILITY

Combines outdoor durability, shooting ergonomics and elegance in one rifle.

SAUER 100 STAINLESS XT

AVAILABLE CALIBERS: .223 Rem, .243, .270, .308 Win, .30-06 Spring, 6.5 Creedmoor, .300 Win. Mag.

SAUER 100 STAINLESS CLASSIC

AVAILABLE CALIBERS: .223 Rem, .308 Win, 6.5 Creedmoor



All the standard features of the Sauer 100 that you know & love!

WEIGHT MINI / STANDARD	3.0 kg WEIGHT MAGNUM		3.1 kg
BARREL MINI / STANDARD	560 mm	BARREL MAGNUM	620mm

Quality made in Germany, the classically robust Sauer 100 is ergonomically designed for total control. Three position safety combines easy handling with maximum reliability. The Sauer 100 stands out thanks to its adjustable, crisp single-stage trigger. The trigger weight can be easily adjusted between 1,000 and 2,000 g (2.2 - 4.4 lbs) for personal preference. The ERGO MAX stock is distinguished by the comb inclining to the rear. This improves the position of the head behind the rifle scope, allowing for calmer aiming. In addition, the felt recoil is considerably reduced.

Every barrel is cold-hammer forged and thus a guarantor for precision of less than one MOA. Receivers are made using the latest CNC milling technology, in order to perfect the symbiosis of barrel and receiver as well as Sauer's legendary smooth bolt operation.



MADE IN GERMANY

3 - Shot MOA Guarantee at 100m



J.P. SAUER & SOHN ESTABLISHED 1751









Howa KRG rifle a well-priced option, claims Daniel O'Dea

o achieve consistent accuracy in a rifle, correct and stable mating of a barrelled action to the stock is crucial. If bedding surfaces aren't completely inert (can't be affected by temperature, humidity or other influences) your point of impact can potentially shift between shots. In bygone days when rifles traditionally had wooden stocks with actions bolted directly on to timber this could be quite apparent as such wood can swell or warp with humidity. Likewise, often from the factory the barrel would also press hard against the stock within the barrel channel and as the barrel heated up the tension and harmonics could change. If you wanted your rifle to shoot well you'd generally send it to a gunsmith to have it bedded and floated.

As rifle stocks developed, more inert materials were sought for construction and we ended up with stocks made from fibreglass, laminates and other modern polymers and in unison with this came improved methods of bolting actions into stocks such as pillar bedding. One of the more recent developments has been where the barrelled action bolts into a completely inert alloy chassis and once torqued provides arguably a solution all but impervious to change.

But there can be downsides such as weight and despite most designs being skeletonised, complete alloy options for the most part are heavier than their modern contemporaries. Then come styling and ergonomics, both completely objective of course, though some simply prefer the look and feel of a more traditional design. Thankfully you can now enjoy the best of both worlds with options such as the Howa KRG rifle which comes standard with a KRG Bravo stock being a fine example.

US-based company Kinetic Research Group (KRG) was formed more than a decade ago by a group of then activeduty special forces soldiers who, as both professional and sporting shooters, were looking to develop improved equipment. They built a successful business with several small arms designs but are known for their tactical-cum-competition boltaction rifle stocks and accessories. These stocks appear polymer but still contain a chassis in the form of a solid alloy backbone running from the tang through to the foreend to which the barrelled action mounts, providing a precision machined bedding surface where it counts most. The rest of the stock is made of lightweight polymer.

Under review the Howa KRG rifle in appearance carries stock lines somewhat reminiscent of the popular A5-type stock design but packed with modular features. Starting from the front everything effectively bolts to the alloy backbone, so although polymer the fore-end for instance has no flex and remains completely rigid. The tip of the fore-end has a recess from which the chassis is visible and machined to accept an optional spigot mount for fitment of a bipod or other accessories forward of the tip. To the sides are M-Lok slots (two per side) for additional accessory or rails fitment options and the fore-end underside comes with a standard sling swivel stud to accept a Harris-type bipod or sling. Another five M-Lok slots and additional hole spacings provide even more options for fitment of barrier stops.



The fore-end is flat and broad to sit well on a bag or rest from the tip to just before the magazine well and from here it steps down about 15mm (this step can be used as a barrier stop in its own right). The top edge of the fore-end also has provision via 10 M4 bolt holes to mount a night vision rail/cap directly to the chassis.

The system is designed to work with AICS pattern magazines and I believe this includes the polymer Magpul (7.62/.308 parent case) PMAGs. I was running a 10-round Accurate-Mag which performed flawlessly in the rifle. A steel magazine release lever sits forward of the triggerguard and is fitted with a polymer wing (or ears) to provide ambidextrous release with just the tip of your trigger finger. The magazine well is generously bevelled for changes so ergonomically with these features combined it's easy to drop the mag and replace it without coming off the gun which is beneficial in timed competitions.

The near-vertical pistol grip on the stock has plenty of palmswell and fills the hand

nicely, its deep contour providing for the adaptation of various grip styles. The grip includes a hollow base accessible via a catch and removable base-plate on the bottom and there's also an Allen screw for more permanent retention. Bottom of the buttstock is flat but includes a cover plate which, when removed, provides conversion to a butt hook-type stock with optional replacement cover plate to that style. Between the end of the cover plate and start of the recoil pad you'll find hole spacing providing ease of fitment of a bag rider, short rail or monopod.





NEVER MISS another issue of

Australia's favourite hunting magazine!

- Hunting stories from Australia and overseas
- Hunting tips and advice
- Firearm reviews
- New products for shooters
- Camp kitchen recipes

Four issues delivered to your home for just \$30



membership.ssaa.org.au

Bravo!

The adjustable cheekpiece has a knob to the right for height adjustment while length of pull can be altered via the addition of up to three supplied polymer spacers along with a series of corresponding bolts of appropriate length, the spacers measuring ³/s" or just under 10mm each while a soft rubber kick-pad completes the package as standard. Howa KRG's stock also offers Tool-Less adjustable height and length of pull buttpad assemblies if you wish to upgrade. Finally, just to the rear of the cheekpiece is a slot for fitment of a quick detectable sling cup, one of which also comes provided as standard with the stock.

The Howa KRG stock's precision machined inletting includes a radius bedding system for consistent contact between action and chassis, starting with the rifle broken down as a stock and barrelled action it was a simple operation to assemble and once correctly torqued down with the two provided action screws you're basically ready to go. In this case the Howa barrelled action was already scoped and sighted with a Zeiss 5-30x50 V6 so I had only minor adjustments to make.

Once on the range it was quickly evident the Howa KRG rifle with its Bravo stock was well up to the task in the accuracy department. Sub-MOA five-round groups were the norm with three-shot groups often printing much tighter, half-minute groups readily achievable when I played my part. I didn't do any serious load development with the Howa KRG, relying mainly on reloads using mixed once-fired brass combined with ADI AR2209 and either 140gr or 147gr Hornady ELD projectiles. This along with American Gunner 6.5 Creedmoor factory ammo always proves a great performer.

Behind the rifle I found the stock comfortable to use as the design sits well



Right-side profile of buttstock with adjustable comb.



Inletting for the action lug and front screw.

both on a benchrest or bag and as usual I ran it in my Caldwell Lead Sled for accuracy work before fitting a Harris bipod to shoot prone off the mat. I really like the grip, always having preferred a generous palmswell and also found the low contour of the vertical pistol grip combined with a high thumb hold just behind the tang enables you to leverage off the thumb if required, to crack the bolt open in initial extraction in order to work the bolt quickly.



The ambidextrous magazine release is easily accessible with the trigger finger.

The adjustable cheekpiece has a recess on the forward edge which appears to be there for bolt clearance. Perhaps it's different with other action variants fitted to KRG stocks. but with the Howa 1500 the bolt shroud doesn't come back that far during cycling and the recess isn't deep enough to achieve bolt removal for cleaning. To do that you need to pop the cheekpiece off by releasing the adjustment knob/clamp and lifting it away. It has no memory for height setting but the easy fix is to place a couple of simple rubber O-rings on the cheekpiece studs which, after being slid down to the preferred position, can be removed and returned to the same height without issue.

In summary I found the Howa KRG rifle with its Bravo Chassis (stock) a solid, wellfeatured, well-priced, modular platform which represents a practical and accurate rifle. Priced competitively at time of writing it features a stock with all key requirements for some competition rifle disciplines along with the modularity to build it into perhaps the stock you might wish for but may not currently have the budget for. Paired as it is with the Howa 1500 action you end up with a competitive rifle at a modest price. The Howa KRG Rifle is distributed in Australia by Outdoor Sporting Agencies and visit the KRG website for more information.

SILVER PIGEON V

THE ULTIMATE EVOLUTION OF THE LEGEND

Superior quality envelops every feature of the Silver Pigeon V. The fine engravings are made using state-of-the-art 5-axis laser technology and feature deep scroll engravings with modern floral details. The exquisite gloss finish enhances the grain of the stunning grade 3 wood and protects it from rain and humidity. The new model features a gold-plated single selective trigger, allowing the user to select the barrel for the first shot with a simple quick sideways movement.









more info

Consider this ...

Con Kapralos offers five contenders in the .22LR arena

t could be said the .22 Long Rifle (.22LR) cartridge is the most widely available and used worldwide as, being chambered for a myriad of longarm and handgun actions, the humble .22LR is a rimfire cartridge for all manner of applications. Longarms chambered in .22LR are widely accessible in a multitude of designs from single-shot bolt-actions, bolt-action repeaters, pump-action and self-loaders to name just a few. In Australia the boltaction repeater reigns supreme with the good ol' rabbit gun part of our hunting culture and folklore, instrumental through the Depression years where the plentiful rabbits fed the nation.

For the shooter or hunter looking at a bolt-action either as their first rimfire rifle or to add to their collection, there are many makes and models both on the second-hand market or new from the major Australian importers. Following on from the popularity of our .308 Winchester rifle comparison a few years ago we decided to conduct a similar appraisal, this time turning the spotlight on the .22LR bolt-action repeater.

All major Australian importers were approached with a request for a candidate rifle for the assessment but with supply chain logistics hampered by the COVID-19 pandemic, some importers didn't have sufficient stock to put one forward for our requirements. In the end we decided five rifles constituted an ideal sample group for the comparison and these were commissioned as follows:

- Tikka T1x MTR (Multi-Task Rifle) supplied by Beretta Australia
- CZ 457 Beech Wood supplied by Winchester Australia
- Lithgow LA101 TSP X Chassis rifle supplied by Outdoor Sporting Agencies
- Rossi 8122 supplied by Outdoor Sporting Agencies
- Weihrauch HW66 Production my own rifle (distributed by Alcock & Pierce) All rifles are current production models

All fines are current production models with a retail price span between \$375 for the Rossi to just shy of \$2000 for the Lithgow, the purpose of this exercise being to compare the features of the five side-by-side with a list of pros and cons. Additionally, an ammunition test with three commonly available rimfire loads would see how they stack up. Each rifle would be tested with either a fixed-power 6x scope

	Tikka T1x MTR (Multi-Task Rifle)	Lithgow LA101 TSP X Chassis	
Calibre	.22LR	.22LR	
Other rimfire calibres	.17HMR	.22WMR/.17HMR	
Importer	Beretta Australia	Outdoor Sporting Agencies	
RRP	\$1149	\$1995	
Overall length	960 mm	985mm	
Weight	2.6kg	4. l kg	
Action			
Action	Bolt-action - repeater	Bolt-action - repeater	
Receiver material	Steel	High-tensile steel	
Finish (barrelled action)	Matte black	Cerakote - matte black	
Iron Sights	N/A	N/A	
Scope mounting provision	I Imm dovetail rail on receiver, also drilled and tapped for scope mounting	Drilled and Tapped for bases/rings- comes with 2-piece bases fitted as standard	
Available in left-hand model	Yes	Yes	
Safety mechanism	Two-position, linear travel behind bolt notch	Two-position, linear travel behind bolt notch	
Bolt/Bolt handle	Steel bolt body, steel bolt handle, 60° bolt lift	Three-lug, 60° bolt-lift, rear-locking bolt with cocking indicator	
Trigger	Single stage, adjustable	Match quality, single stage, adjustable	
Trigger pull (grams)	1450g	1510g	
Length of pull	340mm - adjustable with additional spacers	350mm - adjustable with additional spacers	
Barrel			
Barrel length and profile	510mm semi-heavy contour, cold-hammer forged chrome-moly steel (also available in 410mm length)	530mm medium varmint weight, cold- hammer forged military grade steel, 11° target crown	
Barrel attachment to receiver	Three retaining screws attach to front receiver ring	Threaded tenon	
Threaded muzzle	Yes - 1/2"x28	Yes- 1/2"x20 UNF or 1/2"x28 UNEF	
Rate of twist	One in 16.5" - 6 grooves	One in 16" -6 groove	
Barrel finish	Matte black	Matte black	
Magazine			
Material	Polymer - detachable clip	Polymer - detachble clip (CZ 452/455 compatible)	
Capacity	10-round	5-round or 10-round	
Stock			
Material	Injection moulded polymer with 35 per cent fibreglass -accepts interchangeable Tikka grips / fore-ends. (Rifle accepts all synthetic Tikka T3x stocks)	Southern Cross Arms TSP X Aluminium chassis (rifle also available with standard polymer / walnut / laminate stocks)	
Recoil pad	Hard polymer buttpad	One-inch rubber pad	
Sling swivel studs	Yes- QD	Flush Fitting swivel cups, M-Lok slots provided for compatible accessories	
Adjustable comb	No	Yes	
Triggerguard	Polymer one-piece integral with magazine port / magazine release button	Integral to aluminium chassis	
Bedding	Recoil lug- cross-slot milled into underside of front recever ring mates up with steel recoil lug affixed to mortise in stock floor. Receiver beds directly onto polymer stock. Barrel free floating	Full-length aluminium chassis	

The five candidates side-by-side

CZ 457 Beech Wood	Rossi 8122	Weihrauch HW66 Production
.22LR	.22LR	.22LR
.22WMR/.17HMR	.22WMR (Model 8122M) .17HMR (Model 8117)	.22WMR/.17HMR
Winchester Australia	Outdoor Sporting Agencies	Alcock & Pierce
\$1060	\$375	~\$1700 (advertised price)
975mm	900mm	1040mm
2.6kg	1.8kg	3.0kg
Bolt-action - repeater	Bolt-action - repeater	Bolt-action - repeater
Steel	Steel	Steel
Satin black	Satin black	Gloss blue
N/A	Optional	N/A
I I mm Dovetail rail on receiver	I Imm Dovetail rail on receiver	mm Dovetail rail on receiver, also drilled and tapped for scope mounting
No - but select models of the CZ 457 available in LH	No	No
 Two-position, linear travel behind bolt notch	Cross-bolt safety	Two-position, linear travel behind bolt notch
Steel bolt body and handle, 60° bolt lift, polymer bolt shroud at rear	Steel bolt body, steel bolt handle, 60° bolt lift	Steel bolt body, steel bolt handle, 60° bolt lift
Single stage adjustable	Single stage	Match trigger, single stage. Adjustable (also available as a Direct Trigger or double-set Hunting Trigger)
1000g	2000g	500g (Match trigger)
358mm	340mm	365mm
Light sporter weight 525mm in length, cold-hammer forged steel	Sporter weight 460mm (also available in 410mm, 540mm, 560mm lengths)	560mm medium weight, button rifled
Interchangeable barrel system - accepts other CZ 455/457 rimfire calibre barrels	Pinned	Threaded tenon
Yes - 1/2" x 20	Yes : 1/2" x 28 UNF or 1/2" x 28 UNEF	Optional - 1/2" UNF
One in 16"	One in 16"	One in 16"
Satin black	Satin black	Gloss blue
Polymer - detachable clip (compatible with CZ 455) - pressed steel versions available	Pressed steel/polymer follower	Pressed steel with steel follower
5-round or 10-round	10-round	5-round (8-round option available)
Beech Wood, classic American stock pattern, oil finished, ornate 'Fleur De Lys' chequering on grip and fore-end	Synthetic polymer - available in black, brown, grey, green olive dark, pink, tan. Shallow ambidextrous cheek-peice	Walnut, classic American pattern, matte oil finish, no chequering
20mm sorbothane recoil pad	Thin rubber	20mm rubber pad
Yes - QD	Yes - QD	Yes - QD
No	No	No
Polymer triggerguard with inletted steel shank incorpo- rating the magazine port	Polymer one-piece block incorporating magazine well, maga- zine release lever, cross-bolt safery and triggerguard. Houses trigger group. Attached to underside of receiver	Steel - integral part of steel frame which comprises of magazine well, trigger group housing and triggerguard
Steel recoil lug located in head of the stock mates up with milled recess in underside of receiver rear tang. Composite synthetic pillars provide additonal support for the receiver. Barrel free floating	Polymer-block housing (containing trigger group, cross-bolt safety, magazine well) atttached to receiver underside - beds directly to polymer stock inlettting surfaces. Barrel free floating	Steel frame which comprises of magazine well, trigger group housing and triggerguard attached to underside of receiver. Frame beds directly onto inletting of walnut stock with the aid of sleeved pillars. Barrel free floating

Five contenders in the .22LR arena

or variable power set on 6x to keep things consistent and five 5-shot groups with all brands of ammunition in each.

What this exercise won't do is 'score' or 'grade' the rifles as that's not the object. Some readers may ask 'why wasn't this one included?' which is a valid argument but if we could've accessed every popular rimfire on the market with no logistic or supply restrictions the comparison would've been exhaustive to say the least.

> The five rifles tested were (top to bottom) Rossi 8122, CZ 457 Beech Wood, Lithgow LA101 TSP X Chassis, Tikka T1x and Weihrauch HW66 Production.

Overall performance at a glance

Tikka TIx MTR

Performed well with the 10-shot polymer magazine feeding loaded rounds without an issue and ejecting fired cases positively. The quality of the trigger was good 'out of the box' and the rifle turned in some respectable groups despite inclement range conditions. For a rifle that will withstand all the environmental conditions on offer and deliver accuracy, the Tikka T1x certainly fits the bill. Ammunition top performer: Eley Standard (average group 19mm)

Pros

• Built on the back of the legendary Tikka T3 / T3x centrefire platforms • Accepts any synthetic Tikka T3x riflestock (drop in fit) • Two scope mounting options available (dovetail / drilled and tapped) • Light weight (2.6kg) • Two barrel lengths available • Excellent trigger - same as T3x unit

Cons

No flush fitting magazine available.
 No walnut / laminate models available • Not available in .22WMR • Polymer buttplate



The five magazines on our comparison rifles (from left) Tikka T1x, Lithgow LA101, CZ 457, Rossi 8122 and Weihrauch HW66 Production.



Lithgow LA101 TSP X Chassis

This one's suited to shooting prone or off the bench but with one of their conventional stocks would make a great hunting rifle. The trigger was as good as expected but accessing the magazine release lever in the chassis underside was a tad frustrating at times.

Loading of rounds into the chamber and extraction and ejection of fired cases was once again good, the only minus with this outfit being the adjustable comb on the TSP X chassis. With the scope mounted reasonably low over the receiver, the comb in its lowest position wouldn't allow my master eye to line up behind the scope 'eye-box' and had to be removed for proper eye alignment so one small point for OSA to consider. Ammunition top performer: Eley Standard (average group 19mm)

Pros

 Australian made - and proud!
 Barrel attached to receiver via threaded tenon
 5 and 10-shot magazine options
 Also available in standard stock configurations (walnut, laminate, polymer)
 Aluminium chassis for superior stability and strength
 Adjustable comb

Cons

 Heavy - but not a stalking outfit, best suited to shooting on a bench or prone.
 Only one scope mounting option (drilled and tapped for scope bases - no dovetail)
 TSP X Chassis adjustable cheek-piece not suited to low-mounted scopes

CZ 457 Beech Wood

Takes the chocolates for the prettiest rifle in the mix here with the ornate 'Fleur-De-Lys' chequering superb while the Beech Wood did have some figure in the grain. The rifle performed faultlessly but with the pedigree of Brno/ CZ-UB behind the 457 you wouldn't expect anything less. Trigger was excellent and provision of a decent recoil pad a nice touch. Two small minuses were the threaded muzzle cap which sat slightly proud of the barrel surface where a flush-fitting cap would give it a seamless appearance, and the composite synthetic bedding pillars where aluminium would have been far more desirable for a few extra dollars.

Ammunition top performer: Eley Standard (average group 24mm)

Pros

 Classic CZ styling with revered pedigree • Two magazine options - and easy to find (compatible with CZ 455) • Superb "Fleur-De-Lys" checkering pattern around grip and fore-end • Accepts interchangeable rimfire calibre barrels (CZ 455/457)
 Decent sorbthane recoil pad • Light weight at

Decent sorbtrane recoil pad
 Light weight a
 2.6kg
 Nice, crisp trigger, adjustable

Cons

• Only dovetail provision for scope mounting not additionally drilled and tapped • Threaded muzzle cap sits proud of barrel surface

• Composite synthetic bedding pillars - aluminium would be more desirable

Five contenders in the .22LR arena

Rossi 8122

For the money the Rossi 8122 is fun and even though the rifle's built to a budget and end-user in mind, it's a great little gun suited to plinking and entry-level hunting. Having two 10-shot magazines supplied is a bonus and being able to choose from an array of stock colour options is another thumbs-up. The compact nature and light weight are its best attributes though the heavy trigger wasn't conducive to shooting the tightest groups possible but at this price it's indeed a great rifle. Ammunition top performer: Eley

Standard (average group 27mm)

Pros

• Slim and compact design • Optional model with iron sight • Pick from a range of stock colours

Ultra-light weight - ideal for backpack hunting
Pressed steel magazine with 10-shot capacity

Cons

work

Trigger a bit heavy
Bolt a tad sticky - but should bed in with use
No flush fitting magazine
Cross-bolt safety a bit unusual - but seems to

Weihrauch HW66 Production

Being my own rifle this Germanmade product is one classy firearm. Everything is quality from the match chamber and trigger, all walnut and blued steel without a hint of polymer it's a purist's rifle. It shot as expected, functioned perfectly and being fitted with the match trigger option came into its own in the accuracy stakes. The only factor to its detriment is the total lack of chequering on the walnut stock though the latest models have this. With all things rimfire and German, quality doesn't come cheap and the same can be said for additional magazines. Ammunition top performer: Eley Standard (average group 15mm)

Pros

All steel and walnut construction - no synthetics used
Classic styling with German pedigree
Silky smooth action
Option of three triggers units to choose from
Barrel attached to receiver via threaded tenon

Cons

• Additional magazine's quite expensive • No chequering on riflestock (current models do have chequered stocks) • Match trigger - probably not the best choice for a hunting rifle

Overview

What's pleasing is that any of the five rifles tested are quite serviceable as a generalpurpose hunting rifle (the Lithgow LA101 with traditional stock would be included) and they all functioned and performed without issue. Additionally, all these with the exception of the Rossi would perform well in SSAA disciplines such as Field Rifle, Metallic Silhouette and others where a factory specification firearm is acceptable for competition use. The purists who enjoy timber-stocked rifles with blued metalwork are well catered to in the current market but make no mistake, the use of synthetic polymer materials is here to stay - it just depends on your budget and intended application with the diminutive .22LR rimfire cartridge. Long may it reign to be enjoyed by all hunters and shooters in Australia. ●



While four of the rifles have a ³/₆" (11mm) dovetail on the receiver top to accept scope rings, the Lithgow (top) does away with dovetails and supplies two-piece Weaver bases attached to the receiver top (drilled and tapped). The Tikka (bottom) features dovetails for scope ring mounting but also has the dovetail top drilled and tapped to take scope-mounting hardware. The Weihrauch and Rossi share these features while the CZ only has dovetails and isn't drilled and tapped.



All rifles tested used either a 6x fixed power (top) or variable power riflescope set at 6x to ensure consistency.

Accuracy testing

Accuracy testing - conducted using three brands of bulk factory ammunition readily available off the shelf at 50-metres off a benchrest. **Results of five 5-shot groups (mm) at 50 metres**

off a Caldwell Jr Front rest and rear bag.

	Winchester 555 - 36gr Hollow Point 1280fps	Browning BPR - 40gr Round Nose bullet I 255fps	Eley Standard - 40gr Solid 1090fps
Tikka T I x MTR	24,24,37,21,25	35,30,30,32,32	20,12,21,21,20
	Average = 26mm	Average = 32mm	Average = 19mm
Lithgow LAIOI TSP X	23,27,20,31,29	33,34,23,32,30	8,21,22,15,20
	Average = 26mm	Average = 30mm	Average = 19mm
CZ 457 Beech Wood	25,28,31,23,23	28,26,24,27,35	29,18,16,31,25
	Average = 26mm	Avearge = 28mm	Average = 24mm
Rossi 8122	35, 25, 32, 35, 30	40,32,35,39,30	22,28,29,28,27
	Average = 3Imm	Average = 35mm	Average = 27mm
Weihrauch HW66 Production	20,21,24,18,20	27,25,28,25,29	3, 5, 4, 5, 7
	Average = 21mm	Average = 27mm	Average = 15mm

** Scopes used for accuracy testing included variable and fixed power scopes - all used at 6x magnification.

Say squeeze

Don't snatch at that all-important shot, advises Sam Garro

t doesn't matter how experienced a shooter may be or how many times you've told yourself to just squeeze the trigger for that one-off opportunity, there are occasions when the game or long-pursued trophy animal unexpectedly presents itself and as excitement and urge to shoot kicks-in before the animal departs, the firearm is quickly shouldered, cross-hairs lined up and the trigger inadvertently pulled instead of squeezed to result in an off-target shot or dismal miss.

That's when a demoralising self-blame takes over as you search for some consoling explanation but, in the end, resolving yourself there was no real excuse except to learn from the experience is all you can do. It's happened to most of us at one stage



or another, myself included, and apart from adopting a more disciplined approach it should also push us to consider what else could have been done.

Trigger types

When it comes to squeezing the trigger your choice of trigger-type and setting in rifles can make a difference, especially in competition or long-range shooting. To keep it simple and without going into the finer details and intricacies of trigger mechanisms and makes, there's a common single-set trigger with immediate take-up and a double-set trigger where the rear trigger sets the front trigger which then requires a minimal touch to set it off.

Where a hairline trigger is involved requiring the slightest of touch or any trigger adjustment for that matter, for safety reasons a gunsmith or qualified person should be consulted. Some factory rifle triggers can come with a slight take-up before engaging which may or may not be adjustable or can be replaced with a precision aftermarket trigger like the popular Timney, one of several brands on the market.

Triggers themselves come in varying trigger shoe configurations and finger surface area for more comfortable distribution of pressure, some shoe examples being the gator grip - smooth curved, curved and ribbed, 90-degrees and flat with an insert take-up - the choice is yours. The poundage pull on triggers can also be adjusted to a shooter's preference and the recommended weight pull on a hunting rifle should not be less than 3lb or half the rifle weight if greater (normally a pull weight between 4.5 and 6.5lb is good for most recreational shooting). How to best position your finger on the trigger varies from shooter to shooter so it's about what feels right for you.

Know your firearm

It's important the firearm rests comfortably on your shoulder so the scope comes up in full focus without a shadowy perimeter or the need to unduly shift your head backwards or forwards. To ensure a scope is properly secured to the rifle the screws to the bases and rings should be periodically checked for tightness and the scope itself mounted to provide sufficient eye relief. The firearm should also be balanced and easy to shoulder without being too weighty and/or too powerful to handle smoothly.

Due to the extensive array of firearms and makes it's recommended a gunshop or gunsmith be used as they usually stock the appropriate mounting bases and rings and can also attend to other work such as adjusting or replacing triggers, floating barrels and bedding actions for improved accuracy. Always carry your firearm in a well-padded gun case when travelling to avoid any sudden knock or bump which may affect the scope's accuracy and properly clean after use as internal barrel build-up can adversely affect accuracy.



Hold steady

At the range, benchrests are designed to provide shooters with a platform to place a rifle rest on or enable a comfortable and steady posture for accurate shooting. In the field, to improve your chances of bagging game it pays to use any natural aid that'll help steady your shot like a tree-trunk or sapling, fence-post, haystack, termite mound or whatever's available. Lying prone with your backpack acting as an elevated dampener for the rifle is another favoured position but be careful not to rest the barrel on any hard surface as vibration on firing can cause a jolting effect. On the other hand, so long as you're prepared to carry or shoulder an extra bit of equipment as I often do for longer range or varmint shooting there are bipods, tripods and other rifle-rest aids to help steady you and if all else fails, wrapping the rifle sling around your arm for a firmer hold or adopting a sitting or kneeling position using your elbows and knees will help steady you.

In the Brisbane Valley I was caught in the open with a trophy stag likely to disappear over the ridge at any moment and with no immediate natural rest to help steady my stance I tried a free-standing shot but it was no use. Laboured breathing from the uphill climb coupled with excitement

Using mechanical aids to improve accuracy.

C. A. MONING THE CONTRACT OF

Sam adopts different hooting stances to prepare.

Say squeeze!

made it impossible to hold the cross-hairs steady yet being too good an opportunity to pass up I quickly adopted the sitting position, lined up the cross-hairs on the stag's shoulder and squeezed the trigger for a clean one-shot kill.

Benefit of a rest

As a simple demonstration to prove the merits of using a rest, place two separate targets at 100m and jog or walk briskly back to the firing line so your breathing is elevated. In a free-standing position and as best as possible, shoot three or four rounds at the first target then, with breathing gradually abating, shoot the same number at the second target time using a bench or other rest to steady your shots. Don't be surprised if you spray bullets on the first target with one or two possibly missing altogether while the second batch should more resemble the expected result of a respectable group.

Practice

Squeezing the trigger so the rifle won't jerk in the slightest should be practised on a regular basis until it's second nature. These days centrefire ammo, even reloading, is becoming more expensive so using a 22LR is far cheaper and avoids extra noise and recoil. And even though the target area, for example the chest of a deer side-on is sizeable, to allow for any nervous trigger squeezing try to focus on a smaller spot about the size of an apple behind the shoulder, rather than anywhere on the shoulder.

Practise shooting at a 20c-sized circle on a 25m target with a 22LR and see how tight a group you can achieve by squeezing the trigger as whether head-shooting rabbits or bigger game at distance, it can be pretty satisfying when you hear the bullet thud after squeezing the trigger, knowing each one was a carefully executed shot.

When it counts

When the shot really has to count on game, especially if it's that trophy of a lifetime or one you've been pursuing for a while and excitement or nerves kick-in, try to control any emotions until after the event. Instead, imagine you're target shooting where you take a couple of deep breaths, partly exhale on the third and squeeze the trigger, especially if tired from arduous trekking as heavy breathing must be controlled before taking the shot.

Don't dwell on it, make it a predetermined action as that way you've given it your best and should hopefully be rewarded. And while we extensively practise and drill ourselves





to squeeze the trigger when it counts, even seasoned shooters can be overcome with the excitement and euphoria of sighting a majestic deer so pulling it all together when it counts can still be a challenge.

Calm is key

I've seen experienced shooters miss their first trophy animal within range through a sudden attack of 'buck fever' or overexcitement where the animal was already bagged in their mind before squeezing the trigger. Our guide on one deer hunt was able to console a disappointed hunter by explaining to him that such misses happen to the best of us and, soon after showing him how to take advantage of a sapling to steady his shot, a red stag across a gully was successfully harvested.

Once a demoralised hunter has controlled those emotions and scored a representative trophy animal, that initial disappointment quickly fades. And if you've been stalking or crawling along the ground for 100m or so, as I once did to edge closer to a mob of goats, it's vital to momentarily pause to catch your breath and calm down before shooting. Provided the firearm being carried performs accurately the rest is up to the shooter to control their emotions, hold steady and squeeze the trigger with that simplistic but all-important little finger action.


WHEELYBIRD 2.0®

WIRELESS REMOTE ELECTRONIC AUTO-FEED TRAP

The **WheelyBird 2.0** is improved from the ground up, starting with the included wireless remote. It has a programmable delay up to 15 seconds, and can trigger the trap from a challenging distance.





CHAMPIONTARGET.COM NIOA.COM.AU

The hunt for Billinghurst

Henri Lach

omewhere in south-east Queensland in a private hideaway lives a perfect working model of one of the world's rarest military field guns, a faithfully replicated Billinghurst-Requa multiple-barrelled volley artillery gun. The two blokes who made it allowed me to take a good look and it's magnificent but have sworn me to secrecy as to their identities and location of the gun - and I was unable to capture any images. That's despite the fact I know for sure the gun is fully licensed and complies with all Queensland firearms regulations.

I've been trying to convince them not to hide their light under a bushel as their skills and creativity should be the providence of all with an interest in firearms history, though my pleas so far have been rejected but I'm still working on it. When one of the partners in this magnificent reproduction exercise first told me of this item (referred to simply as a Billinghurst), I'm sure I wouldn't have been alone in asking: "What the heck is a Billinghurst?" So a leap into history is in order. The chronicles of warfare through the centuries are filled with annals of fascinating developments in firearms. Obviously war has been - and still is - a great platform for developing all sorts of innovations, some good, some bad and some just outrageously impractical. On the practical side we've seen the humble flintlock, percussion and black powder pistol morph into a self-loader with 15-shot magazine - firepower that would've enabled Dick Turpin to hold most of London to ransom in his time.

If the Kentucky rifleman of the 1700s could've traded his squirrel gun for an AK-47 he'd have been able to corner the local game meat market with great profit. The list of useful longarms developed down the years is a matter of record, with the occasional stumbling block like attempts to produce a rifle which fires around corners. In the field of big guns names like Big Bertha spring to mind, yet she didn't help Adolf Hitler win his war.

Now let's look at the documented facts on the Billinghurst innovation for which I've leant heavily on *Wikipedia*: In 1861 on the suggestion of a bureaucrat named Albert Mack, a bloke called Dr. Josephus Requa began thinking about the design of a rapid-fire field gun. Requa talked with his friend William Billinghurst whom he'd known for many years and they devised the scale model of a design.

A Billinghurst field gun in the first stage of construction.

> After it was received favourably, Billinghurst and Requa decided to go ahead with a full-scale prototype which cost around \$500 to build, a substantial amount at the time. The gun consisted of 25 heavy .58 calibre rifle barrels, each 2ft (0.61m) long and mounted together in a secure frame which could be elevated for range, the frame then installed on a two-wheeled carriage. Ammunition was loaded as a long magazine of 25 rounds which were fired by a single percussion cap in a single volley. With a crew of three it could be reloaded and fired seven times a minute, giving rate of fire of 175 rounds a minute, the .58 calibre bullets conical and weighing approximately one ounce (it was also possible to adjust the spread of the guns to make them diverge for use at close range).

Requa met General James Wolfe Ripley on April 22, 1862 to propose the idea but Ripley dismissed him, arguing such a firearm would consume expensive ammunition at a rate sure to cause logistical problems. Requa then approached President Abraham Lincoln on May 1, 1862 who listened to his explanation of Ripley's dismissal and gave Requa a note reading: "Gen. Ripley, please see Mr. A. Lincoln, May 1, 1862."

But Ripley wouldn't budge so Requa went back to Lincoln who then ordered Ripley to arrange a display of the weapon with two tests set in May 1862 producing favourable results. Requa and Billinghurst needed financial backing to proceed with production and organised for a public demonstration as proof to backers, this conducted on August 12, 1862 at Rochester, New York. At the presentation the gun blasted holes in a wooden barrel target 1800ft (550m) away in the Genesee River and with the backers suitably impressed, contracts were drawn up to produce 50 units. A patent numbered 36,448 was issued on September 16, 1862.

The multi-firing invention was never officially accepted into service but records show it saw action at the Siege of Port Hudson, Fort Sumter and Siege of Petersburg as well as the Battle of Cold Harbor. According to records and my own research, a final test was conducted at the Washington Arsenal in August 1864 with a report issued in 1866 indicating the gun was reliable and performed well. As a result, an additional five guns were ordered but advances in firearms technology soon rendered it obsolete and it was consigned to historic oblivion.

So what in this day and age possessed a couple of blokes from Queensland to produce a replica of such a gun and, more to the point, how much time and effort has it required? The joint response is simple: "We loved the challenge." And challenging it has certainly been. They worked off plans



from sites they found on the internet and researched the gun as much as possible, the major stumbling block in their endeavours being configuration and design of the barrels.

The internet again came to their rescue and an obliging and sympathetic US manufacturer proved a saviour. "He really came up with the goods when we explained what we were doing. He knew the story of the Billinghurst and just what sort of barrels we needed," they told me.

Putting it all together was an exercise which required countless man-hours over a total production period of more than two years. Any questions about the cost of this endeavour are met with wry smiles though they admit just importing 25 esoteric gun barrels from the US was an eye-watering fiscal exercise on its own - and of that I have no doubt.

But these two blokes are more than happy with the outcome and pay regular homage to their creation in its little hideaway. So far it has been solely for their eyes only but maybe this Billinghurst will appear at a future antique firearms exhibition and if it does, you can tell 'em you read about it first in *Australian Shooter*.



Original plans which helped create a Billinghurst field gun in Queensland.



Australian Shooter 39

Book Review

Optics for the Hunter by John Barsness

Samuel B. Mann

ne of my American readers There are creditable chapters on focus, recently alerted me to this reticles, parallax and mounting scopes book from a few years ago and properly and some entertaining hunting forwarded me several pages varns illustrating his points. Barsness was regarding Barsness' thoughts on scope relicertainly clued-up on state of the art and ability. I've since bought my own copy and recognised the merits of Burris Signature found it a pretty good read as it covers most scope rings and Posi-Lock turrets 20 aspects of modern riflescopes, binoculars years before I'd heard of either while his and spotting scopes and how to use them. outlook on hunting ethics appeals to me

outlook on hunting ethics appeals to me but may not apply so much in Australia where most of the species we hunt are exotic, if not feral. My favourite chapter is the second one - *Reliable Scopes* - where he asserts: "Recoil causes most scope breakdowns and its effects are cumulative" then goes into various ways this can happen, including

its effects are cumulative" then goes into various ways this can happen, including with airguns and muzzle-brakes. Barsness gives a certain European brand a real whipping and accuses it of wearing-out its scopes with destructive testing before sale and even claims scopes were more reliable decades earlier but is a tad vague on why that might be (I wonder if the scopes he recalls from those days were made in Europe before it fell foul of US decadence).

He finally mentions reticle-movement scopes on Page 103 but only with derision, associating them with pop song *Yummy yummy yummy* which is a bit weird as by 1968 the only US firm still making them was probably Unertl, the no-nonsense manufacturer of target scopes used by Carlos Hathcock and other US snipers in Vietnam. That bubble-gum song would better describe the seductive newer models with innards that could bob around like a go-go dancer's butt though Barsness does have a soft spot for one US brand and even admits one of the names there had been a hunting companion of his.

John Barsness

FOR

UNTER

These few criticisms aside I rate this an excellent book (one of very few on the subject) and of great application to most modern rifle shooters. I recommend you track it down and while I can't say if it's still in print, Amazon lists new copies at \$74 though there are plenty of used ones online and this reviewer found an excellent copy from a non-Amazon source delivered for \$A25. The A5 hard-cover totals 260 pages, includes monochrome photographs, interesting tables and a 14-page index.

• *Optics for the Hunter* by John Barsness is published by Safari Press (1999). The reviewer is the author of another book on the subject: *Light at the start of the tunnel* - *Are rifle scopes off the rails*? (Bunduki Books, Australia 2017). ●

diaphragm's cropping.

His information on rangefinders and night

vision is not surprisingly a bit dated with

the passage of time but instructive to look

The chapter on brightness in scopes is

excellent and explains lens coatings partic-

ularly well while as a study of eye relief

and its reciprocal/rival field of view the

the blinkered world of modern scopes.

I'm not sure how he concluded that few

I suspect he deduced that an exit pupil

good scope brands used field stops, though

corresponding with the objective diameter

must mean there is none. If that is indeed

how he did it, I'd contend most field stops

the stream of light which defines the exit

pupil inverts narrowly, well inside the stop

are near the second focal plane where

third chapter is very good, at least within

back on nevertheless.



Expanded insurance options

FOR PROFESSIONALS AND COLLECTORS ncreased firearms and accessories here for our members and this expanded protection is now an option for those offering reinforces our commitment to

needing more than the standard \$25,000 cover available to members. The new offering from SSAA General Insurance Brokers (SSAAIB) caters for up to \$125,000 of cover for your firearms and fixed accessories and allows you to tailor coverage amounts to your needs. This Top-Up cover protects your belongings at home, on the range, hunting or overseas for up to 28 days.

SSAAIB General Manager Megan Spiniello said a lot of work had been done to bring the new cover which was created in direct response to feedback from members with high value firearms and collections. "I never want a member to come to us and be told no, we can't help you," said Megan. "I'm proud of the work we've put in with Precision Underwriting to offer flexible options for people's needs. We're

serving all firearm owners and their unique situations."

To obtain the new top-up cover for high value firearms and collections you must have the \$25,000 SSAA Mutual Members Firearm Protection available for \$35. You can then contact SSAAIB direct and opt to increase coverage by a further \$50,000 or \$100,000 with the annual premium being around \$250 per \$50,000 of additional cover though this will vary slightly depending on which state or territory you live in.

In addition to the new Top-Up Cover, SSAAIB offers personal accident and firearms cover for firearms professionals such as pest controllers and trainers. The existing firearms protection personal accident cover option for members only applies to those participating in lawful recreational

shooting activities. This stipulation had effectively excluded some members who conduct pest control, harvest wild animals for income and operate as firearm trainers from receiving cover.

The new option for professionals is the result of extensive work by Precision Underwriting and SSAAIB to ensure cover is tailored to their needs while remaining affordable. Megan said this was again created in response to member demand. "This allows us to offer flexibility in our cover and meet the needs of all shooters," she said. "Our members come from different backgrounds and those who earn an income from shooting need insurance, just like any other small business." For more on these products and all general insurance needs contact us on 08 8332 0281.

"You asked for it!"

Megan Spiniello General Manager SSAA Insurance Brokers



SSAA Member

Advantage

SSAA \$50,000 Top-UP Cover for high value Firearms and Collections.

Are your firearms worth more than the \$25,000 cover vou have from SSAA Mutual Firearms Protection. Well now we can offer Members an additional \$50,000 cover with SSAA Firearms TOP UP Cover.

Your valuable firearms investment will be covered for a combined total of up to \$75,000 at home, on the range, hunting or overseas for up to 28 days. SSAA \$50,000 Top-UP Cover has an annual premium of around \$250 depending on which state you live. For more information check out the SSAA Insurance Brokers web site or give us a call, we make getting insurance easy.

NSW / QLD / ACT Call: 0455 777 685 ali@ssaains.com.au

SA / WA / VIC / TAS & NT Coll: 0478 007 614* nadia@ssaains.com.au

All General Insurances











Travel

*Office Hours SSAA Insurance Brokers Pty Ltd | CAR 315403 | ABN 86 077 822 970 is a Corporate Authorised Representative of PSC Connect Pty Ltd | ABN 23 141 574 914 / AFSL 344648 SSAA TOP UP Cover is an additional Insurance cover and does not replace the SSAA Mutual Firearms Protection. The information provided is for general information purposes only, and it is not a substitute for professional advice. You should always consider the PDS/Policy wording before making a decision.

crime scene po nor cross Get this to the lab!

Senior correspondent Rod Pascoe takes an inside look at forensic 'fingerprints'

e've all seen cop shows on TV where a crime scene is overrun by people in white gowns with 'Forensics' emblazoned across their back, cameras flashing, taking measurements, making notes, rummaging through cupboards and turning out drawers in search of clues. Where a firearm's involved we also hear that familiar line: 'Let's get this down to the lab' as a detective picks up a spent cartridge case from under the sofa and while that's not exactly how a crime scene is managed, it's good enough for TV.

But what exactly happens to that fired case when it goes to the lab and what information could it provide to help solve a crime? In the same way DNA and fingerprints uniquely identify an individual and separate them from the rest of the population, the scratches and impressions left on a spent cartridge case and fired bullet point to the firearm they came from.

When we wander around our local range we may pick up a discarded, fired cartridge case and immediately identify it by its headstamp and might even assume the type of firearm it came from. For example a .30-30 Winchester must have been fired from a lever-action rifle of the Winchester or Marlin variety, right? A 9mm Luger case must surely have been ejected from a selfloading pistol, right? But as it turns out there are other types of firearms which use these cartridges and in law these assumptions won't and don't stand up to intense scrutiny. So what can be done to remove this ambiguity?

Let's take a hypothetical scenario from our TV show. The pathologist has recovered a projectile from a victim and although fragmented there may be enough of that bullet to examine for clues. The detective found only one spent cartridge case at the crime scene under the sofa. No other bullets, spent cases or live rounds were found nor was a firearm or other firearm part such as a magazine.

At the lab examiners first determine some basic information about the fired case with the naked eye before delving deeper is it a pistol, rifle or shotgun cartridge case, rimfire or centrefire? Let's say it's a centrefire case from a pistol - what's the cartridge typically called? It's been determined as a 9mm Parabellum (aka 9mm Luger) with the aid of measurements and the stamp clearly displayed on the head and the head stamp usually carries a brand name too.

Let's refine the search a little further to determine if it's a factory load or a home reload and this is where a microscope comes into play. Reloaded cartridges should be self-evident due to a number of clues - incorrectly seated primers, extractor and ejector marks from previous firings, residues remaining inside the cartridge case and a lack of case or primer sealing lacquer, particularly in military variations.

Sometimes when lead projectiles are used, remnants of lead and lubricating material may still be attached to the case mouth. A reload may also show some signs



Only a few brands of pistol have a distinct step in the chamber which prevents gas from escaping back along the cartridge case on firing. This helps in identifying the firearm as a Walther PPQ.

NEW 🚩

<u>feica</u>

LEICA GEOVID PRO 32

Introducing the most compact, super-premium laser range finding binocular with full customised applications for the long-distance shooter and bow-hunter.

The GeovidPro 32 provides a ballistic solution up to 875 yards (Applied Ballistics® Ultralight) including wind correction out of the box, and with the new LPT[™] (Leica Pro Track) feature, you can use the in-app compass tracking system, place a target marker within Google Maps automatically or connect to the BaseMap® app.





NEW

LEICA GEOVID R

The new Geovid R binoculars offer the finest laser rangefinding experience at its price point. The 8 and 10x42 feature an improved 2,000 yard laser with a Recommended Retail Price (RRP) of \$2,690, while the 8x56 features the ultimate in light transmission ability at 3,090 RRP. The 15x56, at 3,590 RRP, is the only 15 power laser rangefinder on the market.

Visit your local Leica Sport Optics Dealer

VIC Bairnsdale Firearms | Delta Tactical | Frank O'Reilly's Sports | Gun Sport Trading | Gunco Sports Superstore H & S Firearms | Miall's Gun Shop | Optics Central

NSW Abela's Gun Shop | Bintel | Elk's Hunting & Fishing | Horsley Park Gun Shop | Safari Firearms | Tamworth Firearms QLD Hall's Firearms Townsville | Hall's Firearms Rockhampton

WA Bino Central | Camera House | Claremont Firearms SA Adelaide Optical Centre | Scoped Out



Get this to the lab!

not seen on pristine commercial loadings which are usually marks or scratches from dies and other reloading tools. Older reloaded brass may also show signs of stretching or bulging and these features could possibly connect them to similar attributes found on ammunition of a potential suspect. The assumption at this point may well be the spent case was ejected from a self-loading pistol but in a court of law that's not enough to prove a case 'beyond reasonable doubt'.

So what other tests can help determine the make and model of the pistol? This is where the knowledge and experience of the examiner comes in, aided by a substantial reference library and various ballistics data bases. In Australia, federal and state police forces have such a library containing brochures, photographs, technical drawings, advertising material as well as samples of almost every cartridge case and bullet - fired and unfired along with ammunition for test-firing.

An electronic image storage and identification system called IBIS (Integrated Bullet Identification System) is also widely used by Australian forensic laboratories and it's common for firearms examiners to visit factories and become familiar with production processes and techniques of individual manufacturers. Examiners can now look at additional marks on the case to determine with a high degree of accuracy the brand and model of the pistol.

These 'operational' marks are caused where the cartridge, case and bullet come into contact with the working parts of the firearm during normal chambering, firing, extraction and ejection of the spent case and by studying the rifling engraving on any bullets found. And in the case of a magazine-fed firearm there may be marks left on the case when the magazine was loaded and cartridges held in position by the magazine lips, subjected to recoil then stripped from the magazine as rounds are chambered (the shape and depth of the firing pin strike on the primer is an obvious operational mark).

Another feature of some primer strikes is the teardrop-shaped drag mark typical in pistols using the Browning-type breech locking system where, during recoil, the chamber end of the barrel drops down as the locking lugs disengage from recesses machined in the top of the slide. Orientation of the firing pin drag mark is compared to the position of the extractor on the breech face along with less-obvious marks from the extractor itself, on and under the rim. This information can further eliminate some makes and models of pistols.

Sometimes unexpected marks can be found such as when a component like a

firing pin or extractor has been replaced by a non-standard part. While on one hand the marks created by the different part can complicate the search, this can also be a handy clue to narrow down the identity of an individual firearm. Wear-and-tear marks can result from misalignment of parts such as an out-of-time cylinder on a revolver which will cause scratches to the bullet clipping the side of the barrel throat.

Other pistol makes and models can be eliminated by examining the impression left by the breech face immediately around the firing pin and from the hole it protrudes. If there's a gap around the firing pin, soft and hot metal from the primer can flow back to occupy any space around the pin. There are other features that point to a small number of brands and models of pistol such as the fluted chamber marks left by a Heckler & Koch, polygonal rather than conventional rifling used by some brands left on the bullet, the distinctive rectangular firing pin impression of Glock pistols or those pronounced semi-circular machining marks on the recoil face of many Tokarev pistols.

Other unique case markings include a step that's impressed around a cartridge case when fired, designed to prevent escaping gasses flowing back towards the breech though this is only used by two or three manufacturers. Marks left on the face of the case head from the loaded chamber indicator pin are only found on a handful of pistols and their position on the head is also a way of determining make and model, so after a process of elimination the suspect firearm in our TV drama has been determined as an XYZ brand Model 7, 9mm self-loading pistol.

Meanwhile as the cartridge and firearm identification was progressing, other scientific investigations are looking at samples of the propellant to check against unburnt powder found in the bore of the recovered pistol and on the victim's clothing, while wounds are also examined for gunshot residue as well as at the crime scene to determine where the firearm was discharged. In this scenario we learn a suspect has been arrested and charged based on other evidence and following a search of their home a pistol (an XYZ Model 7 as it turned out) has been found with a magazine still containing ammunition.

As far as our TV show's concerned that's the end of it - 'lock him up and throw away the key'. But again that's not enough to make a watertight case or for the legal process to be fair, especially in a murder. While it may now be reasonable to conclude a brass case found at the crime scene had come from a particular pistol which also happened to be in the

Numerous marks around the rim show this case has been reloaded many times.



The loaded chamber indicator pin leaves an impression adjacent to the W.



Off-centre firing pin strikes common to both samples.



VERSATILE FOR DIFFERENT HUNTING PURSUITS

The Predator 4 is built for the Aussie hunter, with even more features to help secure the target. Featuring a versatile 4x zoom range, counterclockwise, audible turret rotation, as well as an Illuminated reticle to provide a stronger contrast between the reticle and the target, even in broad daylight. The Predator 4 has an expanded field of view for confidence in the most adverse conditions.



Starting from \$1,349 RRP

Available in 2.5-10x42, 4-16x50 and 6-24x50, the Predator 4 offers the Aussie hunter an exceptional scope without the high price tag.



VISIT BELOW TO FIND YOUR NEAREST STEINER PREMIUM DEALER

STEINER

www.berettaaustralia.com.au/dealers





E3 Reticle

Get this to the lab!

possession of the accused, many questions are still unanswered and attention turns to the bullet recovered from the victim's post-mortem. The forensics team now move to the next stage of investigation known as 'tool mark' examination.

Tool marks are scratches or striations left on a firearm during the manufacturing process and are transferred to bullets and cases on firing and these tool marks along with all other information gleaned during the investigation will hopefully narrow the field to just one firearm. As stated earlier, police forces have a huge amount of reference material available and this also includes hefty firearms reference collections.

Bullets and cartridge cases from similar firearms in the collection are test-fired and compared against crime scene exhibits held in police outstanding crimes files and usually involve firing several different cartridge loadings. The marks picked up by ammunition components often differ from one type of loading to another - a jacketed bullet will behave differently from a plain lead bullet as it travels through the rifling - while differences in the pressures generated during firing and hardness of the cartridge primer will also create different marks.

Firearm examiners will use individual characteristics produced during the manufacturing processes such as changes to cutting surfaces and imperfections caused by wear, as well as changes caused by damage and corrosion during the service life of the firearm. To achieve this the suspect pistol will be fired into a tank of water to recover projectiles for matching with the bullet fragments found in the victim and the same type of ammunition from the suspect firearm will also be test-fired and components collected for comparison.

Images from a high magnification comparison microscope of recovered bullet fragments and test-fired bullets will be placed side-by-side to check for similarities. Apart from individual manufacturers, rifling characteristics such as the number and width of lands and grooves, depth of grooves,



direction and rate of twist, the actual tools used to drill the bore and cut the rifling are also clues and, armed with this information, experts consult another computer database containing all known rifling characteristics.

Tool marks can often be caused by an uneven rifling tool, impact damage to the crowned muzzle end of the barrel or a particular irregularity in machining of the cone at the end of the chamber. Most tool marks inside a completed rifled barrel are created during the drilling, reaming, rifling and finishing operations while burrs are also left after crowning the muzzle and cutting the chamber cone or throat.

Longitudinal tool marks will be left inside the bore where the rifling process cause removal of metal to create the grooves, but the land areas are left with a circular pattern of tool marks from the initial drilling and reaming processes. The cutting or impacting surfaces of tools contain imperfections that'll be transferred to the machined surface, for example the profile of the cutting face of the tool can change due to wear and alter the pattern of marks made by it. During machining the cutting edge of a tool can heat up due to friction and cause loss of temper requiring the tool to be re-sharpened or replaced.



Where a bullet is undersize there'll be clear impressions of the rifling lands markings on one side (left) and fewer on the other (right).



Bullets passing down the barrel may not always bottom out into the grooves, especially when hard-jacketed bullets are involved. Bore dimensions can vary (within tolerances) and the jacketed bullets of some military 9mm Parabellum (Luger) ammunition for instance can be undersize and fired bullets will make clear impressions of the rifling lands and fewer markings on the bullet from the bottom of the grooves.

This has been a broad overview of what's involved in this interesting and rewarding branch of forensics and due to space restrictions I've only explained about half the known reasons for marks to appear on fired cartridge cases that would be useful to a firearms examiner. Yet it must be said that tool mark comparisons and other forensic examinations involving firearms is not a perfect science and sometimes even after a lot of effort some matches are inconclusive.

Firearm examiners are just as important to the process as the science and technology itself and in court the examiner's knowledge, experience and skill will be tested to validate the findings made in the lab. In researching this article I discovered the job of a real forensic firearms examiner is far more interesting than TV shows portray.



High Sensitivity

FALCON IS COMING SOON



SEE THE WORLD IN PERFECT CLARITY

20mk

and SOU

John Dunn admires some inspirational works of wonder

unting and art are quite different fields of human endeavour which, at first glance, would seem incompatible. All too often hunting is portrayed as a destructive force in nature, mostly by those whose interaction with the natural world is limited by the boundaries of their urban existence and exposure to David Attenborough documentaries. Such blinkered thinking ignores the fact hunting can be a practical and functional tool in both wildlife conservation and management, a prime example especially in Australia being pest animal control.

Art on the other hand is seen by many as a celebration of the cerebral, a creative process which allows and encourages exponents to express thoughts and feelings in a benign way through writing and visual mediums, together with music and dance and all the other permutations of self-expression the woke sophisticates in our society are wont to claim as their own. When you look at some of the modern offerings it would seem what constitutes art or not is entirely in the eye of the beholder. I don't have a problem with that as it leaves plenty of room for individuals to see and appreciate whatever they like free from the dogmas of others, a courtesy rarely extended to the hunting and shooting fraternity.

Though I can string a few words together I'm most definitely not an artistic person. That said I know what I like and for years have been collecting hunting-related bits and pieces which appeal, slowly building up a collection that continues to grow and gives me a great deal of joy. Some pieces would never be generally considered works of art simply because of what they are while others have a much broader appeal, some decorative and some purely practical. All display a level of artistic skill in their construction and design which I could never emulate and that's what makes them art to me and in that respect I doubt I'm alone.

Stone and rock

Perhaps the oldest form of hunting art is petroglyphs - representations of birds, animals and fish chipped into rock while ochre pictures painted on the walls of caves or rock shelters are another still quite common example. This type of art can only be collected as photographs and though I'm not sure anyone really knows what they mean any more, they hint rather broadly at a hunting heritage going back to the earliest of times.

Stone tools - knives and axes, spear and arrowheads - are other examples of that heritage and as primitive as they may seem by modern standards, their production required a high level of knowledge and practical skill (artistry) reflected in their symmetry and shape despite the most basic of raw materials they had to work with. In their finished state these tools were used for hunting and processing game, my collection including Aboriginal and American First Nation examples and though some of the latter are modern reproductions, all were made according to the old ways and so help keep some very specific traditional skills alive.



Made for the tourist trade this traditionally carved Tlingit salmon is a glorious piece of hunting related, hand-crafted woodwork.

Wooden

This spans the ages from ancient to more modern times and includes indigenous and folk art as well as decorative pieces. Some of my wooden items are a little rough, specifically made for the tourist trade but nice to have anyway and include a number of traditional Tlingit carved wooden parts from America as well as a couple of traditionally made boomerangs from northern Australia and a woomera that's been around for the best part of 40 years. As someone who finds himself flat-out carving a Sunday roast, I appreciate the workmanship that goes into them! Two of my favourite wooden pieces are hand-carved decoy ducks, one Australianmade and the other from California. They sit quite comfortably among an array of other decorative ducks I've collected down the years and what they lack in sophistication they more than make up for with their rustic, used-a-few-times looks. There's also a brown trout hand-carved by someone from Big Sky Carvers in Montana and most who see it think it's taxidermy. At the other end of the mundane scale I have a practical, hand-carved wooden hunter's cup I brought from Finland in 2004, a simple object fashioned from a single piece of wood. All the Finnish hunters I met on that trip carried them, so this one brings back lots of good memories.

> Folk art - a couple of hand-carved decoy ducks, the one on the right Australian-made, the other American.

Art in advertising - a modern print of an Eley publicity board from around 1900.



Aboriginal hunting art on the skull of a buffalo bull from the Robert Tritten collection.

Bronze

At present I have seven bronzes, the one I've had longest being a red stag and one half of what was originally a decorative mantlepiece pair. I also have five sambar deer, two of them limited edition pieces created by the late Arthur Bentley along with three sambar stags including a composite piece of a stag at bay to three small hounds made by Dennis Bullivant. There's a buffalo bull made by Dennis which draws a lot of comment and all are lifelike representations of the animals they depict, the craftsmanship involved demonstrating high levels of artistic ability even non-hunters can appreciate.

Painted

I admit I've never seen any hunting paintings which appealed to me enough to buy, though that said I've quite a few prints of old advertising material originally created as painted art, one of the nicest being a modern print of an old shop board for Eley shotshell cartridges. I believe the original was produced around 1900 and have never



been able to decide if the old bloke in it's a gamekeeper or poacher but either way he has a satisfied look on his face, no doubt testament to his success with one or other of the Eley cartridges displayed in the bottom corner. For many years Remington produced calendars featuring printed artworks of US gamebirds and animals in natural settings and properly framed the individual prints make fine wall displays in a trophy room or office.

Taxidermy

A collection of artistically mounted game heads and animals are the sort of hunting art all serious hunters aspire to. Good taxidermy is an artform in its own right and like so many other things you only get what you pay for but for that once in a lifetime trophy animal it's worthwhile.

Bronze buffalo bull handcrafted by Dennis Bullivant.

Art and soul

Firearms and engraving

Quality firearms have long been seen as a natural canvas for the special artistry of metal engravers whose work ranges from traditional, foliate swirls and scrolls through to relief-carved game animals and precious metal inlays. All those variations require extraordinary levels of artistic skill and dedication to produce what's sometimes referred to as 'working art' or 'art that shoots' and the pride and satisfaction of owning and using finely-engraved firearms is always worth the cost involved.

Custom knives

My old friend and mentor Rob Dewey always said that as simple tools, knives should be of simple construction. That's the way he made his and given their collectability these days there are lots of folk out there who'd agree with him. Other makers prefer to use exotic materials and produce bespoke knives which are true works of art not only in terms of form and function but overall quality of materials and increasing numbers of knives are now being made and bought as collectables. Others are meant to be used and either way the sheer pleasure of owning such items is good for the soul and that my friends is what hunting art's all about.





Though engraving is normally found as an artform on firearms, it can also enhance more mundane objects such as folding knives. Both these were engraved years ago by Lee Davidson.

Hanic . 410 Lever action shotgun

.410 calibre. 2 ¹/₂" cartridge shells. Solid steel action and other metalwork - no inferior metals. Quality Turkish walnut.



Contact us for nearest stockist 0428 453 425 kayhunt@bigpond.com



Communication vital to our ongoing efforts

Rachael Oxborrow, Media And Politics Officer

obbying and advocacy are everevolving processes for the Sporting Shooters' Association of Australia (SSAA National) and involve everything from campaigns to phone calls, meetings and the traditional letter. In the lead-up to the Federal Election earlier this year, efforts were focused on contacting all sectors of the political divide to advocate for the reinstatement of a non-funded Commonwealth Firearms Advisory Council (CFAC).

Post-election contact was made with a slew of relevant office holders in the Labor Ministry and Liberal Coalition Shadow Ministry to raise the CFAC reinstatement and other relevant points, which included highlighting the importance of hunting in pest animal management and the uniqueness of target shooting as an all-abilities sport.

Following this correspondence both the Minister for Sport, Anika Wells, and Minister for Agriculture, Murray Watt, responded and continued the conversation and it's these seemingly small interactions which allow SSAA National to ensure we remain in the peripheral vision of government ministers and their departments. This can be useful if they wish to seek expert opinion relevant to our interests or should we need to address more urgent matters, while this type of correspondence also gives insight to their political priorities and their values in areas relevant to our chosen sport and pastime.



In our most recent reply to Minister Wells we were able to delve into the topic of increasing participation in sports and promoting inclusive environments. These values were brought to our attention in the Minister's previous correspondence and this is a prime example of how common ground can allow us to highlight important issues. As we welcomed the announcement that shooting will be included in the sporting line-up at the Victorian 2026 Commonwealth Games, we were again able to remind the Minister of target shooting's appeal as a sport to a large and ever-growing section of the Australian community.

There's a time and a place for making noise in lobbying and advocacy activities but establishing respectful and informed communication channels before issues reach crisis point is always a good first step. ●

More awards for Field to Fork!

Named as one of the top two in the 2022 Gourmand Cookbook Awards Best in the World – Meat Cookbook category and the winner of the 2021 Best Meat Cookbook – Australia award, Field to Fork – Second Helpings is the perfect addition to your cooking library.



\$49.95 Includes Free Postage! Order online at greataustralianoutdoors.com.au

High quality and easy to use thermal products at an affordable price

Stealth Series XD

Thermal Monoculars by NightTech

monoculars on the market

- Simple and easy to use
- Rugged, reliable and built to last
- High-resolution displays (OLED on Pro Models)
- 12µm pixel pitch for best image quality
- XST technology providing exceptional image quality and clarity
- Thermal detection ranges out to 3500 metres for a deer
- Wi-Fi, live-streaming and built-in recording on most models
- 3 year warranty

XD35-I





DES		*
1000	STRALIA	
-10	STRALLA	NOW
	TALI	

RRP \$AUD

\$1,599.00

\$2,799.00

\$3,199.00

\$3,799.00

\$4,999.00

	Thermal Mini-Sigh
AL DE	MS-19R
	MS-25R
	MS-35R
	MS-42R
2R	MS-50R

We are committed to supporting our Australian customers with the recent opening of our NEW Australian Tech Centre

XD Mini-II

Visit www.night-tech.com or speak to your local dealer today



Distributed in Australia by Ground Force International. For dealer enquirers please visit www.gfpa.com.au

⁻hermal

XD35-II

XD50-II

1onoculars XD Mini-II

XD50 PRO-II

XD65 PRO-II

RRP\$AUD

\$899.00

\$2,399.00

\$2,999.00

\$3,799.00

\$4,299.00

LOOM with a view

Meopta binos put Thomas Tabor in the picture

The Meopta MeoPro HD Plus 10x42 is compact and armour protected.

MeoPro HD P

f you're not familiar with Meopta the name may sound a bit strange but it's actually a prolific high-quality European optics manufacturer which has been in production for almost 90 years. While the company make high-quality sporting optics they also develop and manufacture a wide variety of other precision products like electro/optical systems which are used in the semi-conductor, medical, aerospace and military industries worldwide.

One of their most recent products is the Gen 2 MeoPro HD Plus binoculars which are currently available in two sizes of 10x42 and 8x56. These upgraded mid-priced binos feature sharper and brighter views through the lens with better contrast than their predecessors offered, making them a great choice for hunting, wildlife watching or close-up viewing of sporting events.

This improved design includes a re-engineered focus wheel for smoother, faster and more precise adjustments while heavy emphasis has been given to making them both rugged and durable, their magnesium alloy body covered with a rubber armour coating to protect from the rigours of outdoor use. Twist-up eyecups are made of metal rather than plastic and come with soft rubber exteriors to make long viewing sessions a bit more comfortable. Game is often most active during the early morning and evening hours when ambient light is at a premium and Meopta's advanced lens coatings and new optical system both work to draw in light during these times.

Light-gathering

While there are various characteristics which affect how an optical product performs under poor light situations, particularly influencing its light-gathering abilities, the exit pupil value of that device is a key element. In many cases the manufacturer provides that value but it can also be easily determined by taking the objective diameter of the lens (in millimetres) and dividing that number by the magnification of the optic. Once that exit pupil value has been calculated a comparison is made between it and the user's own eve pupil size and the closer these two values are to one another the better the optic's lightgathering ability should be.

A person's pupil size will vary but generally speaking younger people through their teenage years can have larger pupils than some adults. Nevertheless a fair representative of most adults would generally be about 5mm so that size is often used for comparison purposes with the optic value. In this case the MeoPro HD Plus 10x42's exit pupil would be 4.2mm and while not necessarily a perfect match to that 5mm standard, it's fairly close and as such it's assumed it should perform fairly well when ambient light is starting to wane.

metopla

But while theory's always a good place to start when evaluating most products, sometimes you simply have to rely on realworld exposure and experience. In order to do so I headed out to see how the MeoPro Plus would perform during the evening hours around my home where the terrain consists of hillsides, dark canyon bottoms and ridge tops, which I thought would provide a diverse environment for judging their ability to penetrate those dwindling light areas.



Honouring those who were only 19 Veterans Remembered Men's Ring



 Sides feature tribute to pivotal Vietnam battles in which Aussie diggers fought courageously





- Poignantly engraved
- Plated in gleaming 18K gold
- · Genuine black onyx inlay
- Arrives in a gift box, along with a Certificate of Authenticity

They were the forgotten diggers. A generation of young men who fought for Australia like their fathers before them. But they returned as outcasts, casualties of a war nobody understood. Yet time heals he injustices of the past. Now, you can honour our Vietnam diggers with the *"Veterans Remembered Gold Ring"*, available only from The Bradford Exchange.

This heartfelt tribute is expertly handcrafted and plated in 18K gold to create a shining tribute to those who served. The ring cap features the stirring words "Veterans Remembered" in dramatic raised-relief. The cap also features a genuine onyx inlay, a stone believed to promote personal strength and stamina, the very attributes which helped our veterans survive on and off the battlefield. Each side showcases sculpted acknowledgements of Long Tan, Tet, Vung Tau and Nui Dat, pivotal battles in which our veterans gallantly fought. The inner band is engraved with "A Nation's Gratitude", heartfelt thanks from all of us to the men whose courage and resilience wrote a sterling new chapter in the proud Anzac legend.

Available for a Limited Time Only

Available in men's sizes 8 – 15, high demand is expected for this gleaming tribute to our Vietnam heroes. Secure your ring today for 5 instalments of \$39.99 or \$199.95, plus \$19.99 postage and handling, backed by our 120-day guarantee. Send no money now. Return the coupon or go online today at www.bradford.com.au/veterans





Place one of your own rings on the chart and find a circle that is completely covered by your ring (a simple band works best for accurate measuring). Write your size on the coupon below. Men sizes range between 8–15.

PAY NOTHING NOW



- 2. MAIL no stamp required, to: The Bradford Exchange, Reply Paid 86369 Parramatta NSW 2124
- 3. PHONE: (02) 9841 3311 Lines open 24 hours, 7 days a week

Please allow between 2-10 business days for delivery. All sales subject to product availability and reservation acceptance. Credit criteria may apply. Our privacy policy is available online at <u>www.bradford.com.au</u>. You must be over 18 years old to apply. From time to time, we may allow carefully screened companies to contact you. If you would prefer not to receive such offers, please tick this box. _____

Zoom with a view

From the outset I realised in order to properly evaluate the MeoPro's lightgathering abilities I needed something to compare their performance against so I also took along my Nikon 10x50 and Leupold 10x42 HD binos, the former being about 12 or 13 years old, the Nikons about 25.

Off and on for 45 minutes I compared the three until darkness fell and over that time the MeoPro Plus clearly and unequivocally outperformed both its rivals and even though the Nikon's exit pupil perfectly matched the target value of 5.0, their age likely hampered performance. In recent years great inroads have been made in the area of lens treatments which also improve an optics ability to draw in light. When I bought my Leupold 10x42s they were at or near the top of the Leupold line of binoculars and came highly recommended by company officials but a little over a decade later they too seemed to pale in their lightgathering abilities against the MeoPros. It would be impossible to provide an accurate quantitative comparison assessment for each of these binoculars when it comes to light-gathering abilities but in the test circumstances the MeoPro HD Plus were a clear winner.

Characteristics

Like the vast majority of binoculars today the MeoPro HD Plus come with only one barrel (the right) fitted with a diopter adjustment dial. The focus wheel sits between the barrels and is heavily grooved to be non-slip and quick-focusing. Lens caps are included for all four lenses, the eyepiece/ocular lens cap being a combined single unit which can be attached to the comfortable carrying strap. The flexible rubber objective lens caps are separate and include a band which fits around each



barrel which means they remain attached to the binos at all times. Sometimes the ability to focus on a close object can be beneficial and that distance can vary considerably from one optic to another and the MeoPro 10x42s gave crystal clear focus as close as 2.5m.

The way I see it

This is the first Meopta product I've reviewed and I came away quite impressed as the MeoPro HD Plus 10x42s performed well in all aspect of testing. Not only did I find them clear and high quality I found their light-gathering ability superb and those same assets should be what everyone looks for in binoculars, particularly hunters. Weighting 0.65kg (22.9oz) some may consider them a tad heavy but I view an optic with a bit of heft as an indicator of quality, as too light and I start to question the type of material used.

My only concern in the construction of the MeoPro HD Plus is their rubber armour coating which seems to have been wrapped around and bonded to the barrels. Obviously this was done to not only protect the binoculars from potential damage but to provide a soft non-slip surface and in this case I wonder if that bonding will hold up when exposed to heavy usage. I hope it will but only time will tell if this minor concern will prove valid.



Specifications:

Manufacturer: Meopta Sport Optics Model: MeoPro HD Plus 10x42 (8x56 also available) Magnification: 10x Objective lens diameter: 42mm Field of view at 1000yds: 99m (325ft) Eye relief: 15mm (0.59") Close focus: 3m (9.9ft) Exit pupil diameter: 4.2mm Dioptric Comp: +/- 4.0 Weight: 0.65kg Length: 13.8cm (5.42") Depth: 4.9cm (1.92") Width: 12.7cm (5") RRP: About \$965

"We make it easy to get the Business Insurance you need."

Megan Spiniello General Manager SSAA Insurance Brokers

Fire and Perils Business Interruption Public Liability Burglary Glass Money

Before you renew any Business Insurance policy get an obligation FREE quote from our team.

We put relationships and personalised service first because we're not only Professional Insurance Advisers but SSAA members as well. We listen to your specific needs then obtain coverage from Australia's leading Insurance companies. We can arrange all types of Business and Personal insurance and we make sure everything is correctly covered. Going forward we manage your claims and take care of all the details.

You spend BIG money on Business Insurance so before you renew any insurance policy get an obligation FREE quote from my team at SSAA Insurance Brokers - A SSAA company set up to help members."

NSW / QLD / ACT Coll: 0455 777 685* ali@ssaains.com.au

All General Insurances



Farming Professional



Trade



SA / WA / VIC / TAS & NT

nadia@ssaains.com.au

Coll: 0478 007 614*



*Office Hours SSAA Insurance Brokers Pty Ltd | CAR 315403 | ABN 86 077 822 970 is a Corporate Authorised Representative of PSC Connect Pty Ltd | ABN 23 141 574 914 / AFSL 344648 SGIB-BUS.09/22.01



A SSAA Member Advantage

Go with the Pro

ATA's 12-gauge shotgun made Paul Miller a happy man

urkish firm ATA builds a huge range of affordable firearms, producing a wide array of shotguns from reasonably basic over-andunder models and self-loaders to quite elaborately engraved side-plated versions. They also make sporting bolt-action rifles including a long-range option as well as an impressive-looking air rifle.

But the shotgun we're looking at here is their 12-gauge competition model and from the outset I must say it performed extremely well and punched above its very reasonable recommended retail price. Some years ago we reviewed an ATA 20-gauge over-and-under which also performed admirably and was lots of fun in that smaller but most capable gauge.

Stock and fore-end

The 32" Pro 12 features a Grade 2 walnut sporting stock with dimensions of 1.5" and 2.4" which is pretty low nowadays and more in line with the dimensions of classic American field stocks. It measures 14.37" (365mm) which is a tad short to my mind but was nevertheless comfortable to shoot. There's minimal cast for right-handers and these are dimensions which suit people with long necks and encourage a comfortable upright head position and for many people are less tiring to shoot.

For those who prefer a higher comb or ability to change the gun's point of impact to higher shooting then this stock can easily be adapted via the adjustable comb installed at the factory, the mechanism pretty basic compared to many others out there but simple to adjust, does the job perfectly and certainly appears robust.

The stock and fore-end are laser engraved with a colour and figure of walnut which is most pleasing. The fore-end has a push-button release under the barrels like the English Anson & Deeley system with disassembly and lock-up being positive, the fairly full semi beavertail/sporting fore-end again reminiscent of the Beretta 686 series and comfortable in the forehand.

The stock is nicely contoured and pistol grip full enough for a competition gun so it aligns the trigger finger with the trigger to ensure consistency of pull. The recoil pad is reminiscent of the excellent US Pachmayer Decelerator sporting pad with a black plastic tip at the heel to avoid hangups when mounting the gun, the rubber compound also similar and does an excellent job of absorbing recoil.



The Pro 12 with 32" barrels handled beautifully and was a real pleasure to shoot.

HORIZON

The next generation of Franchi Horizon rifles are now available. Available in stylish Strata Camo, Cerakote Beige, White Synthetic & Varmint configurations, all calibres come with a detachable magazine for quick and easy reloads and a super smooth fluted bolt. All Horizon rifles are backed by the Franchi 7 year warranty and 1 MOA guarantee.

Come and take a look at the full range at www.berettaaustralia.com.au/franchi and experience all that is Franchi with one of the best value rifles on the market today.

FRANCHI FEELS RIGHT





BERETTA



Go with the Pro

Barrels

This gun is available with 30" or 32" chrome-lined barrels and 3" chambers, the one on review here being the 32" model. I'll say up front I'm a real fan of longer barrels for Sporting Clays so long as they're not too heavy or the shooter too short or not strong enough to handle them effectively. I find longer barrels steadier to shoot and for some reason they seem to require less perceived lead on longer targets, which is hard to explain with only a slightly longer sighting radius and essentially the same sight picture as 30" barrelled guns. We'll put it down to one of life's little shotgunning mysteries and get on with the business of looking hard at every target in flight and having the courage to pull the trigger when your brain tells you.

The barrels are nicely blued and the 10mm wide rib ventilated and with a red fore-sight to assist in pointing the gun (the ribs between the barrels are also ventilated). Three colour-coded chokes are supplied with this gun in quarter, half and three-quarter and are more than adequate for 95 per cent of Sporting targets, while the Skeet targets I shot with the two more open chokes were destroyed as you might imagine with my favourite 1250fps 28g of No.8 shot.

Action

This is milled from a solid piece of steel and looks remarkably like the earlier 686 Beretta. There seems to be a suggestion these guns are an exact copy of the Beretta when its patents ran out after 30 years but without becoming too technical there are more than a few subtle differences between this gun and the 686 Beretta we previously reviewed recently - not badge engineered so we'll just say 'similar'.

The silver steel action is smartly adorned with 'Pro 12' in an upward swirl (dare I say) rather like a shortened version of that on the prestigious Beretta DT11 so I'll leave readers to draw their own conclusions as I've heard it said imitation is the most sincere form of flattery. Again, not the same but very similar.

The triggers and selector are pleasant to use, breaking at around 4lb each. The combined safety and barrel selector is tangmounted as you might expect and worked perfectly, lock-up achieved by two bolts into recesses centered on either side between the barrels. Another nice touch is jewelling on both sides of the chambers, something usually only found on more expensive shotguns and pleasing to the eye.

Shooting impressions

For all the talk of this gun looking like a Beretta I have to say it also felt like a Beretta and handled every bit as well as the 20-gauge we assessed a few years ago. I was pleased to learn I was being sent the 32" version and wasn't disappointed when I put it together and gave it an initial 'living room' swing.

On the Skeet range it handled just the way I like a long-barrelled gun to do, smooth and precise with targets destroyed. COVID complications meant I couldn't try it on Sporting Clays but I've no doubt it would handle these equally as well. My friends thoroughly enjoyed shooting it - one of them owns the 30" Pro 12 and shoots some of the best Skeet and 5-Stand Sporting scores at our club.

The price point of this gun is pretty remarkable considering its features, handling and little extras like jewelling and excellent blueing. It's certainly an economical competition sporting shotgun and would be ideal as a first or second choice that would last a lot longer than an entry level gun. It comes with a smart soft case of industrial foam inner and suede leather outer. I thoroughly enjoyed shooting it and appreciated its feel and balance - highly recommended.









Specifications:

Manufacturer: ATA Arms Turkey Model: ATA Pro 32" Gauge: 12-gauge, 3" chambers Action: Box-lock inertia cocking Trigger: Single selective, tang safety Barrel length: 32" with 3" chambers Chokes: Three colour-coded extended in quarter, half and three-quarter. Stock and Fore-end: Walnut (Grade 2) with satin finish, full pistol grip and rounded beavertail fore-end. Stock dimensions: 38mm at comb and 55mm at heel, cast 3.5mm for right-handers, 14.5" length of pull Weight: Just under 8lb (3.7kg)

Accessories: Choke wrench, instruction manual

RRP: About \$1850 but shop around **Distributor:** NIOA

Australia's Gunshop WHERE EVERYDAY IS A SALE DAY! NOW YOU CAN SHOP ONLINE - www.hpgs.com.au

\$970.00 20.00

CUN SHOP

SHOTGUN SPECIALS

HORSLE

AVAILABLE ONLY WHILE STOCKS LAST Mail Order Specialists Australia Wide

Bushmeister BA-X12 Marine Synthetic 12ga 20", lever release shotgun, cased 5 chokes......\$1010.00 Bushmeister BA-X12 Marine Walnut 12ga 20", lever release shotgun, cased 5 chokes..... \$1040.00 Bushmeister BA-X12 Synthetic 12ga 20", lever release shotgun, cased 5 chokes......\$970.00

Bushmeister BA-X12 Synthetic 12ga 28", lever release shotgun, cased 5 chokes.....

Bushmeister BA-X12 Tactical 12ga 20", lever release shotgun,
cased 5 chokes\$1080.00
Bushmeister BA-X12 Walnut 12ga 28", lever release shotgun,
cased 5 chokes\$1010.00
Adler A110 12ga 20", Synthetic 5 shot, lever action shotgun \$890.00
Adler B220 12ga 22" Rifled BBL, Synthetic pistol grip stock, 7 shot, straight
pull shotgun\$795.00
Adler B220 Walnut 12ga 20", 7 shot straight pull shotgun \$680.00
Adler B220 Walnut 12ga 28", 7 shot straight pull shotgun \$680.00
Adler B220PG 12ga 20", Synthetic pistol grip stock, 7 shot straight
pull shotgun\$620.00
Adler B230T FDE 12ga 20", Tactical straight pull shotgun, 2x5 shot
detachable mags\$750.00
Akkar 12ga 30", U/O Sporter shotgun silver action, Turkish walnut stock,
5 chokes, cased\$1220.00
Akkar 812 12ga 30", U/O Sporter shotgun black action, Turkish walnut stock,
5 chokes, cased\$1220.00
Akkar Trap 12ga 30", Turkish walnut stock, 5 chokes, cased \$1320.00
ATA Pro 12ga 30", U/O Sporter, grade 2 Turkish walnut, adjustable stock,
3x extended chokes, cased\$1750.00

HANDGUN SPECIALS

Ruger KNR5 Single six 5.5", stainless 22lr/22magnum revolver \$1095.00
Ruger GP100 357 stainless 4", 7 shot revolver \$1370.00
Ruger MKIV512 22lr 5.5" pistol \$870.00
Springfield 1911 Ronan, 9mm stainless/black pistol\$1595.00
Springfield 1911 Loaded Target, 9mm stainless pistol \$1970.00
Springfield 1911 Ronin Target, 9mm stainless/black pistol \$1830.00
Springfield XD-M Elite, 9mm pistol with 3x 10rnd mags
\$1220.00

	and the second se
0.00	and the second s

RIFLE SPECIALS

Ruger American Rimfire 22LR Go Wild Camo 10 Shot Rifle \$730.00
Ruger American Rimfire 22LR Synthetic Blue 10 shot rifle \$595.00
Ruger American Rimfire 22LR OD Green 10 shot Rifle \$695.00
Ruger American Rimfire 22MAG Synthetic Blue 10 Shot Rifle \$595.00
Ruger American Rimfire 22LR Synthetic Stainless 10 Shot Rifle \$720.00
Ruger Precision Rimfire 22LR Black Fixed Stock 10 shot Rifle \$895.00
Ruger Precision Rimfire 22LR BB Fixed Stock 10 shot Rifle \$995.00
Ruger Precision Rimfire 22LR FDE Fixed Stock 10 Shot Rifle \$995.00
Ruger Precision Rimfire 22MAG Black Fixed Stock 10 Shot Rifle \$895.00
Ruger American 223REM Synthetic Blue rifle \$760.00
Ruger American 270WIN Synthetic Blue Rifle
Ruger American 308WIN Synthetic Blue Rifle \$760.00
Ruger American 270WIN Synthetic Stainless Rifle \$795.00
Ruger American Predator 308WIN Rifle \$795.00
Ruger American Ranch Rifle 223REM 10 Shot AI Style mag \$860.00
Savage B22FV 22LR Synthetic Varmint 10 Shot Rifle \$620.00
Savage B22MFVSS 22 MAG SYN Stainless Varmint 10 Shot Rifle \$795.00
Savage MKIITR 22LR Tactical Rifle
Savage Impulse Predator 308WIN 20" AICS 10 Shot Mag Straight Pull Rifle



ECIALS

Bushnell Legend Bak4 10x42 Binoculars\$245.00
Bushnell H20 Bak4 10x42 Binoculars\$210.00
Bushnell TRS-25 1x25 3moa Red Dot Scope \$180.00
Bushnell Engage 1300 6x24 LRF ADV Target Detection Rangefinder \$325.00
Bushnell Engage 1700 6x24 LRF ADV Target Detection Rangefinder \$375.00
Bushnell Elite 4500 2.5-10x40 Multi-x Scope \$495.00
Bushnell Elite 4500 4-16x50 Multi-x Scope \$550.00
Leupold Mark AR MOD 1 6-18X40 AO P5 Mildot Scope \$749.00
Leupold VX-3HD 3.5-10x40 CDS ZL Duplex Scope\$795.00
Leupold VX-3HD 4.5-14x40 CDS ZL Duplex Scope \$790.00
Leupold VX-Freedom 3-9x40 CDS Duplex Scope\$520.00

OTHER GOODIES

Barracuda Prohunter scope mounted torch kit	\$180.00
Caldwell Ballistic Precision Premium Chronograph Kit	\$395.00
Caldwell Lead Sled Solo gun Rest	\$220.00

f 1848 The Horsley Drive HORSLEY PARK NSW 2175 PHONE 02 9620 1313 EMAIL sales@hpgs.biz LIKE US (0) ABN 85 003 914 850 DLN 410 582 683 • ALL PRICES INCLUDE GST AND ARE SUBJECT TO CHANGE WITHOUT NOTICE • WWW.HORSLEYPARKGUNSHOP.COM.AU

Please Note: Some items listed above may sellout before ad is released. While this is unavoidable we will endeavour to keep prices as marked but may change without notice.

THE HEAT SON

Matthew Godson looks at starting your thermal adventure

hermal optics are becoming less expensive and more popular as time goes by. These devices offer those involved in pest control a tool to boost effectiveness and efficiency in the absence of others which have been regulated out of the hands of recreational shooters. I've heard stories about the extraordinary costs people previously had paid to obtain equipment that seemed the exclusive domain of the military but that's certainly not the case nowadays.



Although the price of thermal optics has fallen dramatically it's still a significant investment and I call it an investment because if you set yourself up right and use the technology properly, it'll be a game-changer to the way you operate. When you make the decision to buy a thermal optic the first question you'll ask yourself is where do I start? What should I buy first? Now that's a very important question and one which could determine how well your thermal journey goes and potentially ends.

The main factor to be considered here is how much you have to spend and, if your budget isn't the biggest, you may need to consider buying in stages in what I'd term the hop, skip and jump approach but if you're lucky to have no financial constraints then research the best available products and buy what you think you'll need. The only advice I'd give is buy a thermal monocular exclusively for spotting and a dedicated thermal scope for your rifle as it's much easier to scan the landscape, be it bush or paddock, with a light handheld or vehicle-mounted monocular. Shouldering and waving your rifle around is not only physically taxing, it's not the safest option and safety must always come first.

For those on a budget the number one rule is buy the best-featured units you can afford and don't be afraid to do this in stages as there are plenty of options to Thermal monoculars like the Conotech Tracer LRF 25Pro is an affordable option with great features to start you off.

improve your pest control effectiveness without resorting to cheap subquality gear to get into the game. Buying a quality thermal monocular is the best place to start as this will enable you to see more and do so without alerting the target species which will boost your effectiveness immediately. Increased detection leads to increased targeting to raise your culling numbers.

Tracer

There are a couple of ways to set up a monocular and improve your detection rates. Most can be attached to a spotlight mount via a screw-in thread in their base or, if you're one of those handy types, you could fashion a bracket to have the monocular running side-by-side with a traditional spotlight. If the monocular you buy has Wi-Fi connectivity this can make scanning paddocks and bush much more comfortable. especially if you can broadcast the image on to a tablet as this provides a 360-degree view of what's around from the comfort of a vehicle. There's nothing wrong with using a monocular in the hand but when mounted it has several benefits beyond just having vour hands free.

Using a thermal monocular along with a traditional spotlight or having a highpowered hunting torch attached to your scope is another great improvement and working these in tandem will produce game-changing results. With a monocular to scan areas you'll increase your pest animal detection rate instantly above that of the limited range of a spotlight beam. Bearing in mind the target species may detect your presence if they see a spotlight being waved around, consider using the spotlight only for final acquisition prior to shooting and/or adding red light filters into the mix. This is a good lowcost option to improve effectiveness until you can move to total blackout operations where you have a combination thermal monocular and thermal or night-vision scope in your toolkit. Most animals are less startled by red light so adding red filters should result in reduced flightiness of wary targets than typically seen by white light.

You can use a combination of thermal monocular and red light very effectively until you decide to go to the next level which is stepping up to a night-vision or thermal scope in order to conduct activities in total darkness. Night-vision (NV) scopes are less expensive than thermal so are an option if a thermal scope is cost prohibitive. Thermal optics have much better detection ranges than night-vision scopes but the latter provide better identification as they enable the user to fully identify the target within most shooting ranges without the need to move closer. Thermal scopes are far more expensive than monoculars because the sensitive sensors inside need to be able to withstand firearm recoil and that's one reason I suggest a thermal monocular is the best place to start. Some also claim a thermal monocular and nightvision scope combination give you the best of both worlds.

What to look for

As with all things you get what you pay for and that's certainly the case with optics. As a rough guide thermal monoculars will set you back \$600-\$4000, thermal scopes \$1500-\$7000 and night-vision scopes \$1000-\$2500 so buying a top-notch dual thermal setup will give you little change from \$10,000. This is extremely pricey for the average shooter and the main reason I suggest researching what's most suitable for your personal circumstances and buying new equipment in stages, so consider going for the best you can afford even if it means saving up a little longer.



You don't need top-name brands, just look for the best functions you can fit into your budget, remembering there are new brands entering the market with excellent features at a lower price. For example Conotech Australia has recently released two new models of thermal monocular which both include a laser rangefinder and are at least \$1000 cheaper than similar specification units on the market. A laser rangefinder is a fantastic feature to have as it's difficult to determine distance through thermal optics without a known reference



- Patented push button loading system
- Self-ejecting, manually operated, 5 shot magazine capacity
- 5 chokes
- 20" or 28"- Black synthetic or Walnut
- 12 gauge, 3" chamber
- 2 year warranty
- Category 'A' Firearm

Hunt's Shooting Supplies

Contact us for nearest stockist

The heat is on



Observer

point. What you think is a feral pig at 300m could actually be a cow at 600m so at the very least it could save you a long walk and even more embarrassment.

When choosing a thermal monocular there are a number of important factors to consider. Firstly and most importantly is the quality of the sensor inside (also called the microbolometer) which detects temperature patterns in the landscape. The resolution of the sensor, like a TV, is measured in pixels so the higher the resolution the higher detail of image you see on the monocular screen or Wi-Fi-connected device the unit's linked to.

The refresh rate is also important and this is the frequency at which the image is refreshed on the screen. Refresh rate is expressed in Hertz (Hz) and the more often the image is refreshed the higher the Hz will be (one Hz is equal to one frame per second). Dynamic scenes with a low frame per second rate will show a blurry image with moving objects displaying laggy or jerky characteristics so for hunting scenarios where the unit is used to scan the landscape or quickly change views, consider a higher refresh rate. Most retailers will suggest a refresh rate of 30Hz or more.

One factor which helps define the quality of a thermal device's sensor is the Noise Equivalent Temperature Difference (NET-D) which indicates sensitivity of the device or minimal detectable temperature difference that can be picked up. The lower the NET-D value, measured in millikelvins (mK), the better the sensor quality with the rule of thumb being thermal units with a NET-D value less than 40mK deemed excellent and those less than 50mK being of good quality.

Lens size is another important feature as it plays a crucial role in determining the unit's maximum detection distance. Between different models or types of thermal monoculars, lens sizes cause a variation of detection distances with a general guide being 'bigger is better' for providing longer detection distances. This needs to be considered alongside Field of View (FOV) which refers to the territory you can see through the lens. It will

Identification Ranae

Recognition Range

Detection Rang





The difference in Field of View (FOV) of the two Conotech units, the 2.4x base magnification showing a wider view of the tree line (100m from observer) compared to the 3.3x model.

narrow as base magnification and detection distance increases and FOV is usually given in degrees depicting the angular field of view (for example 10.6° x 7.9°) and sometimes as visible metres across at 100m from the device.

All thermal devices have fixed base magnification that leads to a fixed FOV and it's vital you consider where and how you'll be mainly using the optic before buying to ensure you choose the most suitable FOV for your circumstances. For scanning of open plains you'd ideally

choose a monocular with a narrow FOV so you can see and detect further (base magnification of 2.5x and greater would be the go). If you're walking through forest or bushland then consider one with wide FOV and base magnification from sub 1x up to 1.5x as this will enable you to see more immediately in front of you.

· Next month: Testing FOV and detectability of two base magnification monoculars and using a thermal monocular and scopemounted spotlight for pest control.

HUNT THE NIGHT – AUSTRALIA'S THERMAL HUNTING SPECIALISTS ONLINE AT HUNTTHENIGHT.COM.AU OR IN-STORE





HUNTTHE NIGHT THERMAL HUNTING SPECIALISTS





2/27 BATE CLOSE PAKENHAM VICTORIA 3810

Check-sighting the Spectra 4x. Photo taken by remote means.

Chris Redlich enjoyed GPO's Spectra 4x riflescope

couple of years ago I reviewed a pair of GPO rangefinding binoculars and up until then I hadn't heard much about German Precision Optics (GPO). Relatively new to a competitive optics market, GPO now appear well established with a solid array of riflescopes and binoculars available, so when Australian distributor Raytrade invited *Australian Shooter* to review a new GPO Spectra 4x scope I was more than happy to accept. There are many models in the Spectra scope catalogue to suit almost any requirement and

the one supplied was the basic yet popular 2.5-10x44 (4x zoom), which I consider one of the best zoom and lens diameter configurations for general hunting.

Out of the box

At first glance the new Spectra 4x displayed all the tell-tale signs of high-quality build. Like all scopes in the GPO Spectra series it came supplied with a lens cleaning cloth, bikini lens protectors and, as per standard, the user manual. What was immediately noticeable was the inclusion of a throw





Spectra's G4 appears to be a practical hybrid of German 4 and Plex-style reticles.

lever attached to the variable magnification dial and by all accounts easily removed if you prefer. In the hand the Spectra 4x at a total length of 335mm wasn't dissimilar to other scopes in the niche hunting category and its weight of 620grams was expected considering it has a 30mm main tube.

In a durable matte black protective coating the tube is made from aircraft-grade aluminium. Starting my investigation south, the Spectra's ocular lens and magnification dials are bucking the trend somewhat by not using rubber as a grip material - both dials are extremely grippy and appear to be made with machined lugs out of aluminium. As mentioned the magnification dial came with a throw lever but honestly the dial is easy to grip without it. As expected, the eyepiece dioptre adjustment ring is rubber and will protect the shooter in the event of a recoil 'kiss' from a hard-kicker.

The ocular housing, like most other scopes of European pedigree, is quite large and this one at 45mm diameter required high rings for mounting to my Remington Model 700. The Remington's 90-degree



bolt throw can take some of the blame for high mounting but for many European rifles with 60 and 70-degree bolt-actions the scope can be mounted in low rings.

When mounted to my Remington though the extra few millimetres of height made no difference, taking a clear sight picture through the large ocular thanks to the stock's raised checkpiece.

Although the user manual didn't appear to shed any light on the reticle's focal plane, I soon established it to be in the second plane and situated within the ocular housing is one of my favourite hunting reticles the G4 (German 4). Differing slightly to a standard German 4, the Spectra's G4 reticle has the balance right with heavy 3, 6 and 9 o'clock outer posts which taper sharply at the tips to the fine centre cross-hairs. The G4 actually appears to be a hybrid of German 4 and Plex-styles, the reticle designed with incremental metric values at 100m and the corresponding values can be found in the manual.

Occupying the turret housing is the standard elevation adjustment at 12 o'clock and windage at 3 o'clock, both turret caps generously proportioned and allowing easy grip and removal. The user manual states the Spectra 4x has an ample 235cm (2.35m) at 100m of travel in both directions thanks to the 30mm main tube and click adjustment on the dials are worth 1cm each. The 2.5-10x44 model isn't equipped with parallax correction and is factory set to be parallax free to 100m. Lastly but more importantly at the business end of the scope is its multi-coated 44mm objective lens providing a bright and crisp image enabling 16.2m field of view at 100m on low power (2.5x) and 4.1m on high (10x).



On mounting it to the Remington Model 700 in the Accurate Mag stock chassis my first sight picture through the scope was as expected, crystal clear with comfortable eye relief of almost four inches so with much anticipation I had to wait for a break in the bad weather to put it to use.



Smooth operator

Range and field test

The day finally arrived and I managed to jag a few range sessions with my kittedup Remington 22-250 and from the outset the Spectra 4x lived up to expectation, providing easy target acquisition in varying light conditions. After testing in the review tactical stock chassis I remounted the Spectra to my Model 700 in its original BDL timber stock for the chance to field test in a hunting environment. Once again continuous rain was hampering my efforts to venture out but eventually my son Carl and I managed a brief night's shooting on a friend's property not too far from home.

Just prior to last light I set up a target at 100m to check-sight the rifle and straight out of the safe I was pleased to land a confidence-boosting 10mm 3-shot group using Nosler 55-grain 'Varmageddons.' Needless to say I was happy with the scope and its ability to provide a clear image of the paper target in poor light. After enjoying a 'billy brew' over a campfire immediately after our

A campfire 'billy brew' while waiting for night to fall.

target session, I clamped my Nitecore torch to the scope before an early night of vermin shooting by spotlight though the first hour turned out to be uneventful, as if the local ferals had heard we were coming.

With our stomachs reminding us it was close to dinner time we decided to make our way to the gate and head for home. Nearing the last paddock a couple of hares scurried in and out of a few clumps of grass and I followed them through the scope while Carl pinned them in the spotlight. At about 100m they paused momentarily and I was able to despatch both in quick succession without the aid of the attached torch so our night turned out to be quite eventful after all.

Conclusion

As far as a genuine quality-built hunting scope is concerned, GPO's Spectra 4 2.5-10x44 fits the bill nicely. There's nothing worse than struggling for a clear sight picture when it matters most and shooting those two hares cleanly in grassy cover on our night outing reinforced the lowlight performance of the Spectra lens and enhancing its capability even further. this scope is also available with an illuminated reticle. Very well priced around \$750 at time of writing and backed by a lifetime warranty, the Spectra 4x 2.5-10x44 (non-illuminated) is ideal for the demands of lowlight hunting. For the full range of Spectra scopes visit www.gp-optics.com and find stockists at www.raytrade.com.au







LAST CHANCE AT THESE SPECIALS - DECEMBER PRICE RISE



While stocks last Just \$199

filled rear bag

Massive Leupold Clearance (X-3HD	Now Stockin Bipods and E Javelin Lite Bip
	See Web
eupold VX-3HD 2.5-8x36 CDS ZL Duplex\$789	See Web. Spa
eupold VX-3HD 3.5-10x40 CDS ZL Duplex\$789	CC
eupold VX-3HD 4.5-14x40 CDS ZL Duplex\$945	CCI Primers Available No Small and Larg
eupold VX-3HD 4.5-14x50 CDS ZL Duplex\$1099	Tip
Rangefinder Deal Leupold RX-1400 TBR/W Rangefinder with T-OLED Display True Balistic	Tipton Gun Vis
Range Technology Magnum Special PriceJust \$315	Lyma
/X-Freedom Leupold VX-Freedom 2-7x33 Rimfire MOAJust \$475	Lyman Gen 6 C Powder System Was \$615 , limit
	B Bu
Leupold VX-Freedom 3-9x40 CDS DuplexJust \$495	Crazy Bushnel
eupold VX-Freedom 3-9x33 EFR Fine DuplexJust \$630	Bushnell Fusior
eupold VX-Freedom 3-9x50 CDS DuplexJust \$630	Active Display I Was \$1140,
Leupold VX-Freedom 4-12x40	Bushnell Troph 3-9x40 DOA QI Was \$255 ,No
Long Range DuplexJust \$475	
	Bushnell Elite 4 Multi-X Reticle



ocking Spartan and Equipment ite Bipods\$259

Website for a full range of Spartan Equipment



le Now! d Large Rifle\$174 per 1000



un Vise.

System.....

Bushnell

ushnell Deals

Fusion X 10x42 splay Rangefinding Binos 40,.....Now Just \$965

Trophy XLT OA QBR 5,...Now Just \$169

Elite 4500 4-16x50 Reticle Was \$565,...Now Just \$469

Bushnell Elite 4500 2.5-10x40 Multi-X Reticle Was \$510.....Now Just \$429 iAimino

True One Shot Auto Zero NIOA Backed 3-year Replacement Warranty

Best Value on the Market · Mounts straight to Pic Rail · Simple to use One Scroll Knob Menu · Waterproof

	iA-317	.\$3365
	384x288 sensor 17 μm • 1200m Detection Range	
	iA-617 640x512 Sensor 17 μm • 1200m Detection Range	.\$4080
)	iA-612 640x512 Sensor 12 μm • 2000m Detection Range	.\$5130



New Lower Prices on Springfield Pistols

Springfield 1911 Ronin Stainless/Black 9mm... \$1495 Springfield 1911 Loaded Target 9mm .. \$1815

Springfield XDM Elite 9mmCased with 3 Mags







Tasco Sportsman 3-9x40 Includes Weaver Rings......Just \$139



Tasco Sportsman 3-9x50 Just \$149 Includes Weaver Rings.



Tasco World Class 4-12x40 Includes Weaver Rings Just \$159

2 MONTH LAY-BY WITH A 20% DEPOSIT

MON-FRI: 9am - 5pm SAT: 8am - 3pm PRICES SUBJECT TO CHANGE



www.magnumsports.com.au 19 Babbage Rd **Roseville Chase NSW 2069**

.\$129 nan





A sodden stalk ended with Aaron Carey taking a dip

've only ever shot four red deer in my 16 years of chasing them - a 13-point stag and three hinds - all on the same property in the Upper Hunter region of New South Wales, which I'm extremely happy with and grateful for as I certainly didn't expect to encounter three on one cold and foggy day back in April.

With work commitments and restrictions impacting on my spare time, I didn't think I'd be able to manage a hunt in this year's rut but as luck would have it, the rain which battered the east coast and flooded numerous areas proved a godsend to me - it stopped a lot of people from hunting and allowed me to sneak in a midweek trek. I had a day with nothing planned and as I'd recently been fishing and had some seafood for the farmers who grant me access to their land, I decided to call and make arrangements to drop it off and say hello. It was worth the call as they'd been rained on for days and the hunter who'd booked the property that week had called off as driving the sodden land wasn't an option.

Now I'd call that lazy as it's a smallishsized property of roughly 2000 acres and with a little effort you can walk the lot in a day, even in the rain. Anyway, that was all the encouragement required and I hit the road at 2am the next day to be on site before sunrise and give myself time to walk from the front gate. So it rained and literally didn't stop all day to be honest though I didn't let that faze me as I trekked several kilometres to my favourite spot in the hills to the rear of the property. I approached the long way round so I'd be downwind to sit 50m up a slope above a 300m-wide bench which held a dam and lots of feed surrounded by dense valleys.

rth the wait: Aaron ith his trophy stag.

Then thick fog descended which meant I had only fleeting views of the dam out to about 30m so I settled in to wait it out under a few big trees which were giving me a little relief from the incessant rain. I love this spot, elevated and secluded and away from any road access with only 300m to thick cover for deer if they need to escape.


Do you see what I see? Dahua Thermal Technology

M60 captures sharp thermal imaging at a fast framerate for smooth, impeccable vision on running targets and from moving vehicles. Designed to increase situational awareness at any time of day, M40 can detect humans, animals, and objects in complete darkness, haze, or through glaring light, equipping law enforcement professionals, hunters, and outdoor enthusiasts with reliable thermal imaging in tough conditions.

- Vanadium oxide uncooled focal plane detector
- Ultra-low power consumption
- Fire detection and alarm
- Provides a laser for aiming
- Calculates distance using video analysis





Models

M20 Thermal: 256x192 Lens: 7mm / 10mm / 15mm Screen: 0.2 LCOS 720x540 From \$749 M40 Thermal: 400x300

Lens: 13mm / 19mm / 25mm Screen: 0.4 LCOS 1280x960 From \$1,359

M60 Thermal: 640x512 Lens: 18mm / 25mm Screen: 0.4 LCOS 1280x960

From \$2,749



Available Now! Order through your local Firearm Dealer.

Proudly distributed by Hunting Depot: VIC vjetten@crkennedy.com.au SA jgerhardy@crkennedy.com.au | NSW/TAS mscanlan@crkennedy.com.au WA/NT jgerhardy@crkennedy.com.au | QLD amauloni@crkennedy.com.au

In at the deer end

I've shot plenty of fallow deer in this spot over the years as well as a few feral pigs and wasn't expecting anything different on this day as it was a little early and the rut hadn't really kicked off yet. There were a few croaks in the distance but nothing trying too hard and certainly nothing close until out of the blue came a distinctive roar. It was a long way off on the next property but encouraging to hear and during the next 10 minutes he continued sporadically then slowly faded out. I settled back in to wait out the fog and hoped for a close-by fallow on my bench.

Then out of nowhere came a massive roar from about 50m below me on the foggy bench next to the dam - it scared the life out of me. Then again and again until I realised two stags were now roaring. The next 40 minutes dragged by as I caught a glimpse here, a bellow then another glimpse, some scraping but still no clear view I could use and all just 50m below me.

As the fog began lifting I held my breath. No roaring. I was worried they'd winded me as I slowly made my way across the slope on a game trail to the next tree about 10m away. And there they were, a doublethree and double-five standing beneath a thicket next to the dam. Trying to contain my excitement I took a rest on the tree and waited for a shot to present itself and as the double-three trotted off I could only hope the larger animal would stay put.

To my complete surprise he turned towards me and presented a great side-on shot at 50m. I didn't need to be asked twice as the .300 Win Mag from my Weatherby Vanguard Sporter did its job with a piercing double lung-shot. I could hardly contain myself until excitement quickly turned to concern as I watched him crumple and stagger towards the dam and while he could have expired anywhere, this guy landed in the water.

Solo hunting in the rain and now facing the prospect of having to haul a 200kg animal over a dam wall. How long? After a short swim it took me almost 90 minutes to move him seven metres and to say it nearly killed me would be an understatement. Yet it was worth every ounce of effort as I finally had myself a symmetrical double-five red stag in his prime.

The day had been eventful - and wet - to say the least as I embarked on the rest of my 14.5km round trip carrying my trophy head and lots of venison and to top off the day I knocked over a feral boar feeding in open ground. All in all a 'roaring' success and one I won't forget in a hurry.









BUILDING ON COLT'S SNAKE GUN LEGACY

Colt's popular Snake Gun revolver series gains a new addition with the updated Anaconda. The Anaconda has been fully re-designed to utilize an oversized Python action. Bulked-up with a solid stainless steel frame for strength and durability, this DA revolver is worthy of its pedigree.

FEATURES:

- Linear Leaf Spring Action
- Recoil Absorbing Hogue Grips
- Interchangeable Sights
- Recessed Target Crown
- · Capacity: 6 Rounds











Never have your AirPods bounce out again

ecibullz Custom Moldable AirPods and EarPod Ear Hooks cater to my love of gadgets and my need to be active. The addition of AirPods to my repertoire has saved me many a phone drop and made going for a run that much easier as I'm no longer tethered to my phone by a cord. But my ears don't seem to hold the AirPods in place too well.

Enter Ear Hooks and I'm now enjoying the freedom of AirPods without readjustment every hundred metres or so, while the ability to mould the Ear Hooks using only hot water meant I could work on achieving exactly the right fit. I actually went for my first run and came home early to fix one attachment as it wasn't quite right, so don't shy away from remoulding until you're happy with the fit. Outdoor activities aside, I find the Ear Hooks useful for everyday wear at home or work and now they're moulded to my ear shape there's no danger of an AirPod falling out again and bouncing on to the road - not my finest moment.

These Ear Hooks easily snap on and off my AirPods to allow for storage in a handy bag which fits both my AirPods case and Ear Hooks for safe storage. The matching white colour also gives a seamless appearance to this clever gadget which fit AirPods 1, AirPods 2 and EarPods. Winchester Australia stocks a wide range of Decibullz mouldable ear accessories with the Custom Molded AirPods and EarPods Ear Hooks retailing for \$49.95 plus postage. Visit winchesteraustralia.com.au for more -**Rachael Oxborrow**





onlineshop.ssaa.org.au

Shop now for exclusive SSAA products, including clothing, camping, accessories, knives, books and more.

See the complete range of products in our Online Shop

Please visit our website for more details



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



SSAA beanies



SSAA Schrade Multi Tool Silver

This handy tool can be stowed safely in its sturdy, fold flap pouch and securely closed with a tough Velcro patch. The belt/loop system helps you keep track of your multi tool so you can cut, file, pry and pinch your way through any job.

\$59.95



Help keep your drinks and snacks cool this summer with the SSAA Cooler Bag. Made from waterproof black canvas with a fully insulated lining, it is perfect for taking a snack to the range, drinks out in the field and, of course, getting groceries! Helping to reduce clutter, you can collapse it when it's not in use.

Made by Rugged Xtremes, you can be sure the SSAA Cooler Bag is tough enough to handle whatever you want to throw in there.

\$34.95



SSAA Buffwear

Look stylish in the great outdoors with one of the new SSAA Buffwear which come in four great options - Iron Bark, Bullet, Distressed Leaf and Oz Flag.

Perfect for men and women alike, the SSAA Buffwear can be worn in a multitude of ways and comes complete with a cheat sheet to show you a dozen different options to get the most out of yours.







SSAA Caps

Great caps in a variety of colours with embroidered logos on the front.



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!



SHOP NOW IT'S EASY!

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







SSAA Range Mat and Rifle Carry Case

The SSAA Range Mat and Rifle Carry Case offers two fantastic products in the one item. It is a safe and protective way to transport your firearms and then, once you have reached your destination, you can

use it as a comfortable shooting mat. Simply unzip,

unfold and focus on your target.

\$189.95



Competition News

FOR FULL EVENT DETAILS GO TO SSAA.ORG.AU/DISCIPLINES

National

Muzzleloading Postal Shoot

August 1-December 17, 2022 All locations Program: Categories and details on National website. Contact: Kim Atkinson at muzzleloading@disciplines. ssaa.org.au

SSAA 2022 Lever Action Silhouette Smallbore Postal Shoot

October I-January 31, 2023 All host clubs and branches Program: 40-shot match, results due no later than COB on February 17, 2023 to National Awards Secretary Kathy Tobler, email toblerkathy@gmail.com

Rifle Metallic Silhouette National Championships

April 7-11, 2023

Wanneroo Shooting Complex, WA Program - April 7: Practice and scrutineering; April 8: 80-shot Air Rifle Silhouette; April 9: 80-shot Rimfire Silhouette Rifle; April 10: 80-shot Centrefire Silhouette Rifle; April 11: 40-shot Rimfire Hunting Rifle Silhouette, 40-shot Centrefire Hunting Rifle Silhouette. Facilities: Camping, cooking and toilets on-site. Contact: Paul Dunn Paul@compac.com.au or 0407 428 175.

Lever Action Silhouette National Championships April 13-16, 2023

Wanneroo Shooting Complex, WA Program – April 13: Practice; April 14: Rifle Lever Action Silhouette (80 shots); April 15: Pistol Cartridge Lever Action Silhouette (80 shots); April 16: Rimfire Lever Action Silhouette (80 shots); Facilities: Camping with showers, toilets and barbecue, limited power, barbecue lunch supplied daily. Contact: Warren Goodfield 0407 440 431 laswa@iinet.net.au or David Brougham 0432 748 703 clas@iinet.net.au.

Qld

Queensland NRA Pistol Metallic Silhouette Postal Shoots

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

SA

SSAA (SA) BPCR Silhouette State Championships

November 26-27, 2022 Monarto Silhouette Range, SA Program: Saturday 9am-noon practice; 12.30 40-shot BPCR iron sight match; evening barbecue. Sunday 8.30-9am practice; 9.30am 40-shot scoped match. Contact: Dave McCarthy atm3855@yahoo.com.au

Tas

SSAA (Tas) 5-Stand State Championships November 4-6, 2022

T11 Huon Combined Shooting Club, Tas Program: November 4: Side-by-side 50 targets; Subgauge 50 targets. Nov 5-6: State Championships 100 targets each day. Facilities: On-site camping with toilets, full canteen (cash only). Contact: Dale Foggo 0408 361 638 or dalepest@msn.com (email preferred).

SSAA (Tas) Lever Action Silhouette State Championships

March 11-13, 2023 Westbury Shooting Club, Tas Program: Saturday, March 11: Big Bore Lever Action Silhouette; March 12: Pistol Cartridge Lever Action Silhouette; March 13: Rimfire Lever Action Silhouette (all 80 shots). Facilities: Basic camping with toilets, tank water, no power. Entrance fee includes daily breakfast and lunch. Contact: Steve Collins 0459 834 885 or email admin@westburyshooting.club

SSAA (Tas) Gallery Rifle State Championships

January 27-29, 2023 SSAA Blue Hills, Tas Program: See National website. Contact: David.M@ ssaabluehills.org.au

ACT

Early Australia Day Rifle Metallic Silhouette State Championships January 20-22, 2023

SAA Majura Range, ACT Program – Friday: Dawn to 8.30am practice, 9am 80 shots air rifle. Saturday: Dawn to 8.30am practice, 9am 80 shots rimfire. Sunday: Dawn to 8.30am practice, 9am 80 shots centerfire. Facilities: Camping on range with water, power and showers, \$10 per person per night, juniors free. Canteen available for weekend. Contact: David 0423 043 663 email dtrue222@gmail. com, Mark 0401 867 839 email mnl1@live.com.au.

ACT Black Powder Cartridge Rifle Silhouette State Championship January 23, 2023

SSAA Majura Range, ACT Program: Dawn to 8am practice and weigh-in, 8.30am Black Powder Cartridge Rifle Match. 1pm practice and weigh-in, 2pm 40 shots Black Powder Cartridge Rifle. Facilities: Camping on range with water, power and showers, \$10 per person per night, juniors free. Contact: David 0423 043 663 email drue222@gmail. com, Mark 0401 867 839 email mn11@live.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.

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.



2 AUCTIONS A YEAR

Entrust your Arms & Militaria to the Auction Specialists with a proven & outstanding track record



edged weapons, investment

Contact: Roland Martyn M: 0428 543 377 Cheryl Martyn - Admin P: 03 9848 7951 E: admin@australianarmsauctions.com W: www.australianarmsauctions.com



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





To advertise with the Australian Shooter please email advertising@ssaa.org.au

SSAA ME	EMBERSHIP APPLICATION	Solens ASSOCIATION GR
•	fice, PO Box 282, Plumpton, NSW 2761 Membership No.	AUSTRALL S BNILHOS
	Fax 02 9832 9377 Email membership@ssaa.org.au WAI Have you been a member before? Yes/No	In a second s
Title (PLEASE CIRCLE)	Mr Miss Ms Mrs Other Preferred SSAA Branch	PLEASE
First name		READ AND SIGN
Middle name		This application is made in full
Last name		recognition of the Associations' requirement for responsible and ethical behaviour. I undertake to do all in my power to preserve the
Residential address		good image of the sport and the Associations. I understand that members breaking the Code of
Town/suburb	State Postcode	Conduct and/or Social Media Policies may be subject to suspension or expulsion. Both can
Postal address		be found at ssaa.org.au/code
Town/suburb (IF DIFFERENT FROM ABOVE)	State Postcode	SIGNATURE
Phone (Mobile)	(Home)	DATE: Refund Policy: Subject to Australian law, membership fees are not refundable, nor can they be
Email	<u> </u>	transferred. Members join a SSAA state or
Date of birth	Member referral number if applicable	territory branch. The information you provide on this form will be disclosed to the state or territory branch of the SSAA to which your
Tick to subs	cribe to the FREE SSAA National E-newsletter via email	membership application relates. A copy of SSAA Inc's privacy policy can be found at ssaa.org.au/privacy. You can obtain access to your personal
Each membership categ	All P CATEGORIES AND SPECIAL OFFERS hory (apart from Family Member) includes 11 issues of the Australian Shooter magazine per year.	ATTENTION NSW & ACT
\$95 \$130	 \$125 \$160 Adult (over 18 years) Includes \$35 for SSAA MUTUAL Member Firearms Protection for 12 months, or until next membership renewal. 	MEMBERS Complete this section ONLY if you wish to use your membership of the SSA4 to support your Genuine Reason
\$72	\$102 Additional Family Member (No magazine) Applies to each additional person over 18 residing at the same address as a full-subscription Adult member.	for having a firearms licence. Register your SSAA activities by marking one or more of the following boxes:
\$107	\$137 Includes \$35 for SSAA MUTUAL Member Firearms Protection for 12 months, or until next membership renewal. Supporting Adult member No.	TARGET SHOOTING (longarms only)
\$72	\$102 Pensioner Available on production or photocopy of SIGN UP ONLINE	(club membership)
\$107	\$137 Includes \$35 for SSAA MUTUAL Member Firearms Protection for 12 months, or until next membership renewal.	HUNTING OTHER (R licence, property owner/permission)
\$475	5-year Adult Contact SSAA for SSAA MUTUAL firearms protection information.	Choose the firearms
\$1900	Member for Life Contact SSAA for SSAA MUTUAL firearms protection information.	protection offer
\$175	\$236 Overseas Available to members living overseas.	and for just \$35 you get \$25,000 worth
\$27	\$57 Junior (under 18 years) Parent's or guardian's signature	of firearms and fixed accessories cover.
	IF TAKING OUT SSAA MUTUAL MEMBER FIREARMS PROTECTION. I understand that the Firearms ment of Protection for SSAA MUTUAL Members Firearms Protection is on ssaamutual.com.au for my reference.	Want to know more? Call us at SSAA
PAYMENT		
Enclosed is po	ayment for the amount of \$ Money order MasterCard Visa	02 8805 3900
Card number		
Expiry date	Signature	SSAA MUTUAL
	e to the Sporting Shooters' Association of Australia Inc.	MEMBERS FIREARMS PROTECTION

Member-only competitions

Enter and wi

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) SSAA National PO Box 2520, Unley, SA 5061

Competitions close November 30, 2022

Warthog V-Sharp Classic II Sharpener

Winchester Blue Tee (size XL)

Decibullz Custom Molded Earplugs Black



Or enter online at ssaa.org.au



Australian Shooter September 2022

> Best Shots Mug Daphne Harrison, Vic

ZeroFit Heatrub Ultimate Top Rayser Reibel, NSW

> **Ballistic Polymer Gong** Christian McLean, NSW

Juniors - Winchester Prize Pack Harrison Kiss, NSW

Australian Women's Shooter - Issue 16

ZeroFit Heatrub Ultimate Top Kirsty Camilleri, NSW

RRP \$297.85

White Flyer Navy Cap

Kindly donated by Winchester Australia winchesteraustralia.com.au

Traser P66 Red Combat Men's Swiss Watch

RRP \$779

Kindly donated by SSAA National https://www.ssaa.org.au/



SSAA lunch cooler bag set

RRP \$59.90

Kindly donated by SSAA Online shop onlineshop.ssaa.org.au





AUSTRALIAN SHOOTER is published monthly and is printed by IVE, 83 Derby St, Silverwater, NSW 2128.

The Sporting Shooters' Association of Australia Inc (SSAA Inc) is subject to the provisions of the National Privacy Act. We collect personal information from members of the Sporting Shooters' Association of Australia in the various states and territories. Should you want a copy of the SSAA Inc Privacy Statement or seek further information please write to PO Box 2520, Unley, SA 5061.

Freelance contributions are welcome. We do, however, recommend that potential authors contact the office prior to story drafting. Manuscripts and digital files may be sent to the address shown above. No responsibility is taken for the loss or damage of manuscripts or photographic material.

While the publishers exercise due care with regard to handloading data, no responsibility can be accepted for errors and/or omissions, or any damage suffered as a consequence.

Please note that certain firearm types and accessories advertised in the Australian Shooter may not be legally available in all states and territories. Please check with your local authorities before ordering. Neither the AS nor any of its advertisers accept responsibility in this matter. No text or photographs within the magazine may be republished, either electronically or in print, without the express written permission of the Éditor. Copyright 2022.

Јитрипна

The fair-weather hunter . . . it had to happen

f I include the time spent trapping rabbits for pocket money as a boy I've now been hunting for more than 60 years and much has changed in that time, especially the way I hunt. The bootsand-all efforts of my younger days long ago gave way to a much more measured approach, so much so that these days I expect I could reasonably be regarded as a fair-weather hunter.

One of the first lessons learned when I started hunting sambar deer was that even in good country they're usually mixed up with a lot of trees. Sorting one from the other took time and more patience than I thought I had but I eventually achieved a level of success I was happy with. Needing to know more about the deer I spent quite a few years as a "come down whenever you like" guest with Lu Cervi and his then hound hunting team. I met some terrific people and made some lifelong friends who taught me more about sambar than I could ever have learned anywhere else.

We mostly hunted what Lu called 'mongrel country', thick and steep stuff almost always with wet-to-the-waist river crossings and a long climb out at the end. We earned the few deer we took and carried every single one out which was hard and bloody work no matter how you come at it, even with everyone pitching in to help. I never took a deer over the hounds but I did learn that stalking was a lot easier.

Over the years as hunting the steep stuff became harder I turned my efforts to the farm fringe country where deer couldn't resist coming out to feed on the improved pastures and crops. I watched them at night, learned where they came from and went back to the bush and began to concentrate my hunting around those areas and before long I had tree stands overlooking what I considered the best locations. I also planted in a hay shed in a very productive back corner and for a while there life was good, even if some of the people I knew uncharitably sneered at it as 'old man's hunting'.



The only drawback was climbing down out of the stands in the dark, especially at the end of a wet day. I made a mis-step one evening and only just managed to avoid what would've been a serious fall, something the Good Lady had been gently warning me about for a while. It was close enough to scare me so I changed my approach yet again and began to sit and wait at ground level, wearing camo clothing and backing into any patch of natural cover I could find. That's where I am today and would've finished up anyway as the trees that housed my stands all those years ago have long since to succumbed to old age and isolation and fallen over. The hay shed is still there but an electrified boundary fence now keeps most of the deer from coming in as they used to.

I know most of the places deer are likely to show up and rarely do I have to walk more than a few kilometres which suits me fine. My legs and lungs aren't as good as they used to be so big walks have fallen out of fashion. Because I can I refuse to hunt in the rain these days and experience has taught me early morning starts when there's frost on the deck are largely a waste of time. Perhaps more importantly I no longer have the need to hunt hard as I don't have to prove anything to anyone any more, not even to myself.

As rewarding as it can be, a deer on the ground is just the beginning of a lot of hard work. The hunting ethics I've grown old with dictate I have to use whatever I take and even if the Old Feller isn't around to remind me of that any more, his legacy lives on. Looking back I've done pretty much all I set out to achieve, had more than my share of good times and I'm not as hungry for

new experiences as I once was. I know where I am on my happy hunter scale, I like it and if that means I've become a fair-weather hunter then so be it.



Remington

REMINGTON EXPRESS HUNTER AIR RIFLE PACKAGE

Nitro Piston technology is the standard bearer for gas piston

The Nitro Piston is a nitrogen filled gas ram that replaces the traditional coiled steel spring, eliminating the torque produced by other antiquated power systems and their secondary recoil.

The result... an air rifle that's 70% quieter and incredibly accurate!

CONTACT YOUR LOCAL DEALER FOR ONE TODAY





 Available in both .177 calibre (1200fps) & .22 calibre (950fps)
 4x32 Scope and Mounts included • Fibre Optic Front and Rear Sights • Powered by Crosmans Nitro Piston Technology, 70% quieter, 25% more accurate • Break Barrel

Distributed by:



Ph: 03 9706 5936 E: raytrade@raytrade.com.au









155005 Mikaela, NSW.

For only \$35 get \$25,000 worth of SSAA Members Firearms Protection.

Today more than 80,000 SSAA members have their firearms and fixed accessories covered against loss, theft and damage. They are covered at home, at the range, while hunting and overseas for up to 28 days. Claims are settled for replacement value (up to 5 years), assessed by an approved firearms dealer and settled promptly. Compare it to your Home and Contents Policy, which may have an excess greater than \$100 and may only cover your firearms at home. Don't risk another year without cover - Trust SSAA Mutual to safeguard your firearms and fixed accessories.

Take up this offer with your next renewal or new membership. Are you covered?

Call (02) 8805 3900

Email: megan@ssaains.com.au

HERE'S WHAT SSAA MEMBERS FIREARMS PROTECTION COVERS:

Claims	
Settled	
Promptly	

Cove • Acci

All privately owned firearms registered to the member and fixed accessories.

Firearms & Accessories.

overage.
Accidental loss and damage of
the equipment (including whilst
in use, excluding chipping and
scratching of stock).
Malicious damage.

- Collision or overturning of the vehicle.
- Fire & extraneous perils.
- Flood
- Theft.

www.ssaaib.com.au



MEMBERS FIREARMS PROTECTION

Not Covered.

Theft where the equipment was not stored in an approved gun safe as required by State or Territory authority, other than when the equipment is in use or away from the Insured's premises. Where the Insured or any person or entity to whom the equipment has been entrusted to fails to comply with any law relating to either storage, use or handling of the equipment.

Any commentary provided in the advertisement is general information which does not take into account your individual situation and you should consider SSAA Mutual's Financial Services Guide and Statement of Protection (www.ssaaib.com.au) before deciding to become a member and to purchase and hold discretionary protection issued by SSAA Mutual Limited.