Hunting on top of the world

AFTER THE FIRES

Hunting in a changing landscape

TESTED

Bergara's brilliant rimfire rifle
Garmin Rino GPS/
UHF combo
Sightron rimfire scope

THE FIVE YEAR TROPHY

Bagging a fabulous fallow at last!

.277 FURY

Nick Harvey on the new US military 6.8mm cartridge

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MAIN FEATURE

THE .277 FURY

The US military has adopted a new 6.8x51mm cartridge and it's going to become incredibly popular among sporting shooters. Just like the .30-06, .308 and .223 before it, the .277 Fury will be ubiquitous. And it brings true innovation with it in the form of a hybrid casing made from steel and brass, although it's likely all-brass cases will also be common. The Fury operates at a huge 80,000psi chamber pressure, meaning we'll need beefed-up rifles to handle it, but the reward is a highly efficient cartridge firing a 135gn projectile at over 3000fps!



HUNTING

Tahr in the NZ Alps 16

Tony Kamphorst enjoys New Zealand at its best and worst on a week-long hunt in the alps of the West Coast.

Five-year fallow **50**

Michael Abdennour learns to stop chasing and wait for the bucks. He gets his long-sought trophy as a reward.

After the fires **56**

Between droughts, fires and floods, our hunting grounds are constantly changing. Damo Hart has been watching it.

Young gun, old gold 64

Samara takes a classic .303-25 on her first pig hunt. Both excel. John Dol tells the story.



TEST REPORTS

Bergara B-14 BMR 24

Bergara's line of bolt-action rimfires are no-nonsense hunting tools with high-end features and excellent accuracy at a bargain price.

Sightron 3-9x32 rimfire scope **30**

Sightron's new riflescope is designed and engineered for the .22 LR. It is a serious aiming device for hunters, and it is affordable.

Garmin Rino 750 34

Garmin combines UHF and wireless communication with its long-established GPS prowess in the Rino 750.

ANALYSIS

Knockdown power 46

Knockdown power is overrated. No hunting bullet can literally lift an animal off its feet.

74

.277 Fury

Nick takes a look at the new and very different hybrid round, SIG Sauer's .277 Fury, which has a big future.



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ON THE COVER

A hunt for tahr bulls in New Zealand's high country is one of the most adventurous and challenging pursuits you can take on. Veteran hunter Tony Kamphorst brings you the highs and lows of it on page 16. Cover photo by Tony Pizzata.







The armed traveller

Mick has a pleasant experience with a firearm in the last place you'd think it'd happen.

THE bloke at the airport check-in desk handed back my firearms licence and asked, "Is there something happening in Cairns?"

"Not that I know of," I said.

"We've had a lot of firearms coming through for Cairns today," he said. "There was one group of about six blokes this morning." He began wrapping the yellow airline tape around my gun case and it occurred to me that this was just a normal part of airport activity. A lot of people must transit through Australia's airports with firearms and ammunition.

He rang through to someone in the depths of the airline system to tell them he was "injecting" a firearm and ammunition into the system on behalf of a Mr Matheson, and he let them know the flight number.

When I presented the taped-up case at the oversize baggage desk, another hunter arrived behind me carrying his own taped gun case.

"Not heading for Cairns too, are you?" I asked. He shook his head.

Flying with a firearm is surprisingly straight forward. In fact, it's one of the rare occasions when having a firearm in public doesn't bring on cold sweats and paranoia about overzealous security. No, it's not what you'd expect in this day and age, and it's a shame more scenarios aren't as simple.

All I had to do was organise an ammunition carriage permit with the airline (Qantas) beforehand, which took minutes over the internet. I arrived at the airport with the rifle in a locked case and rendered inoperable by



Before he could carry this rifle in Far North Queensland, Mick had to carry it through major airports. He survived to tell the tale!

removal of the bolt. The bolt was locked in a small case in my check-on bag, along with 60 rounds of ammo in the original packaging.

As soon as I walked into the terminal I told a staffer I had a rifle and ammunition to check in and she directed me to the queue for face-to-face checkin. I stood in the long line with my gun case in hand and no one batted an eyelid. For 20 minutes or so I shuffled forward while having a great yarn with the next traveller in the queue. I suspect the vast

majority of people didn't know the significance of the case.

I get that security around guns should be tight. I get that regulations are necessary. I know that the authorities get touchy about firearms in the community. I understand that we should be extremely discreet about the carriage of weapons.

But gee it's nice to be treated like a normal, friendly person when you're carrying a rifle.

MICK MATHESON Editor

SHOOTER

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OPTIC OF THE YEAR

2022

AMERICAN RIFLEMAN

GOLDEN

BULLSEYE



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TECHNICAL ADVICE FROM THE GURU - BY NICK HARVEY

Letters containing questions for answering by Nick Harvey must be accompanied by a stamped self-addressed envelope. Mail your letters to: **The Technical Editor, 3 Reef Street, Hill End, NSW 2850**.

LETTER OF THE MONTH

Muzzle brakes and accuracy

These days a good many rifles come from the factory equipped with a muzzle brake and a threaded cap. Does attaching a muzzle brake to a rifle have any effect upon accuracy? What happens to the velocity of the bullet? How does a muzzle brake work?

— Brian Martin

A Some people can handle heavy recoil, but many more cannot. Recoil has given some shooters a permanent flinch. For those who are sensitive to recoil I'd definitely recommend a muzzle brake. Some makers claim a reduction of as much as 40 to 60 percent in recoil, and some modern brakes do give that much reduction in recoil.

A muzzle brake is a device attached to the muzzle of the rifle which, on passage of the bullet past the gas port holes,



directs expanding and escaping powder gas to the rear. The gas must be directed to the rear; if it was directed straight out the sides the jet effect of the gas would do nothing to reduce recoil. Gas being directed to the rear decreases the mass of the gas jetting forward from the muzzle and pulls the rifle forward by the gas pressure acting on the forward vanes of the muzzle brake. If the brake redirects even half the gases, it is decreasing the gas jet effect component by one-half.

A brake can further

subtract from the recoil of the rifle by the weight of the gas times its exit velocity times a factor for the angle of the exiting gases. A muzzle brake can reduce the actual total recoil impulse by as much as 30 percent, which will be perceived as a reduction in recoil of about 40 percent.

The main objection to a muzzle brake is increased muzzle blast but it will have no effect upon velocity and in every case I've tried, the accuracy, especially in a very light gun, has been improved. Evidently, a muzzle brake has

some kind of damping effect on a light barrel.

Felt recoil can be further reduced through proper stock design and an effective recoil pad.

When using a brake, you should always use some kind of ear protection, because on a magnum or high-velocity rifle the noise level normally exceeds 160 decibels. Permanent ear damage occurs at 120 decibels. This means that even if you are wearing ear protection, you can still suffer ear damage.

Varmint load for the .270 Winchester

What is a good, accurate varmint/predator .270 load for a Super Grade Model 70 Winchester? I would like a load that is very accurate with a bullet that will break up easily and not go ricocheting all over the paddock to be a hazard to stock.

— David King

A Back in 1978 I did a lot of varmint shooting with my Brno ZG47 topped with a Pecar 4-10x scope. My preferred load was the Hornady 110gn spire point bullet and 54gn of IMR 4064.

Hit a rabbit with that load and bits flew everywhere. Today, for longer ranges I would prefer the Hornady 110gn V-Max bullet and 58gn of AR2209 for about 3300fps. This 110 grainer is explosive on all pests from rabbits to dingoes out to 350 yards and is also deadly on pigs.

.220 Swift vs .220 Rocket

I am considering having my Ruger M77 Mk 1 re-chambered from .220 Swift to the wildcat .220 Weatherby Rocket. I am not really looking to increase velocity, but would probably shoot a 55gn bullet at around 3650fps, which is obtainable with the standard Swift. However, if barrel life could be increased, case life lengthened or accuracy improved, I would definitely have the rifle re-chambered for the .220 Weatherby Rocket. What kind of performance could I expect from it?

— Guy Hanrahan

A You would be burning more powder in the .220 Rocket so you could hardly expect longer barrel life than you would get out of your standard .220 Swift. Pressure and the amount of powder you use govern barrel life to a large

extent. If, by any chance, you were to use the same loads for the same velocity in the Weatherby Rocket, then you would probably get increased barrel life because cases would have greater powder capacity, and pressure would be somewhat lower.

Also, case life is increased by the fire-formed case having a sharp shoulder and minimum body taper.

I think you would get equally good barrel life with the Weatherby Rocket in near maximum loads. I played with a Ruger M77 .220 Weatherby Rocket back in 2000, and noticed some throat erosion



after 1200 rounds, however, most times up to 2000 rounds can be obtained with good accuracy in both the Swift and the blown-out version.

My rifle was going hell for leather: sending the 50gn Speer TNT out at 3950fps; the 55gn Sierra at 3907fps; the 60gn Hornady at 3780fps; and the 70gn Speer at 3477fps. Therefore, I can't see any sense in having a .220 Weatherby Rocket and not loading to gain its full performance.

Mauser 98 safety lug

Are all three locking lugs on a Model 98 Mauser supposed to bear evenly when fired? If so, should I get a gunsmith to check my rifle and, if necessary, get all three lugs to bear evenly?

— Lance Dixon

Both forward lugs on a **A**Mauser 98 should contact evenly, and you would be justified in having a gunsmith fit them to bear evenly, providing headspace was gauged and corrected afterwards. The third, or safety lug, must NOT make contact. This one is actually an auxiliary lug which is on standby duty, just in case. If it doesn't clear, get the gunsmith to grind it until it does. Otherwise, you may break up a receiver. On many Mausers, it clears by as much as 1/16th inch, and this is just fine.

Issues with the .308 and 7.62x51mm

I read your reply to a reader which outlined the differences between .223 Remington and 5.56x45mm NATO ammunition, and you advised against firing the military stuff in sporting rifles. I was wondering, do the same differences apply to .308 Win and 7.62x51mm NATO cartridges?

My Omark 7.62x51mm uses military ammunition with no problem, but the same ammo RIGHT: The Weatherby Mark XXII was designed to be a matched pair with either the De-Luxe walnut-stocked Mark V or Vanguard centrefires.

sometimes jams up in my sporting .308 Win, which is why I no longer use the FMJ loads in it. Why do you think this happens?

— Owen Reid

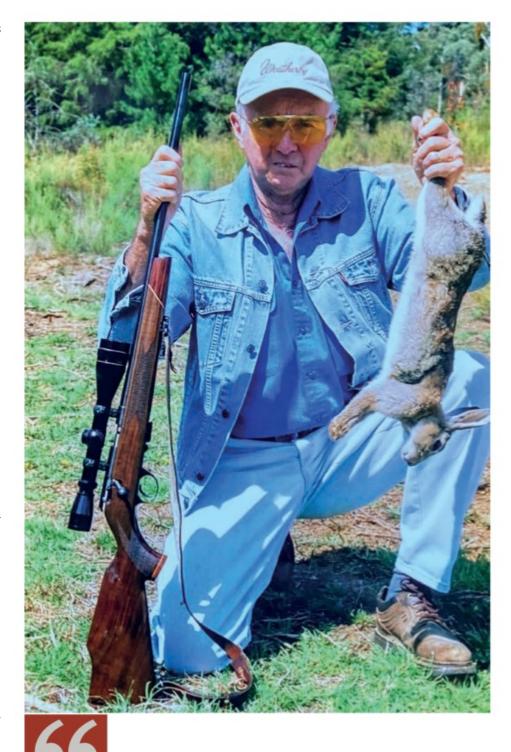
The jams you are experiencing with your Omark in combination with certain commercial loads probably have nothing to do with the .308 or 7.62x51mm NATO or what's on the headstamp. Unlike using 5.56x45mm ammo in .223-chambered rifles, which SAAMI lists in its Unsafe Arms And Ammunition Combinations, there is no such blanket prohibition on using .308 ammo in 7.62x51mm rifles, or vice versa, but caution is required.

The external cartridge dimensions of the two rounds are nearly identical, although 7.62x51mm barrels have 0.013" longer chamber specifications, so there could possibly be head separation issues with the thinner commercial .308 cases. Also, military 7.62x51mm loads may be encountered that exceed SAAMI's .308 Win maximum pressure of 62,000psi. This is why it is always best to use ammunition for which the barrel is designated.

King among rimfires

My uncle has given me a Weatherby Mark XXII .22 rimfire rifle fitted with a 2-7x Leupold scope. He bought it many years ago, but it has seen little use and, apart from having a few scratches on the stock, it is like new. What can you tell me about this rifle? It is very accurate and groups standard Winchester Power Points into ½ to ¾ inches at 50 yards. I think it is a keeper.

— Trevor Scott



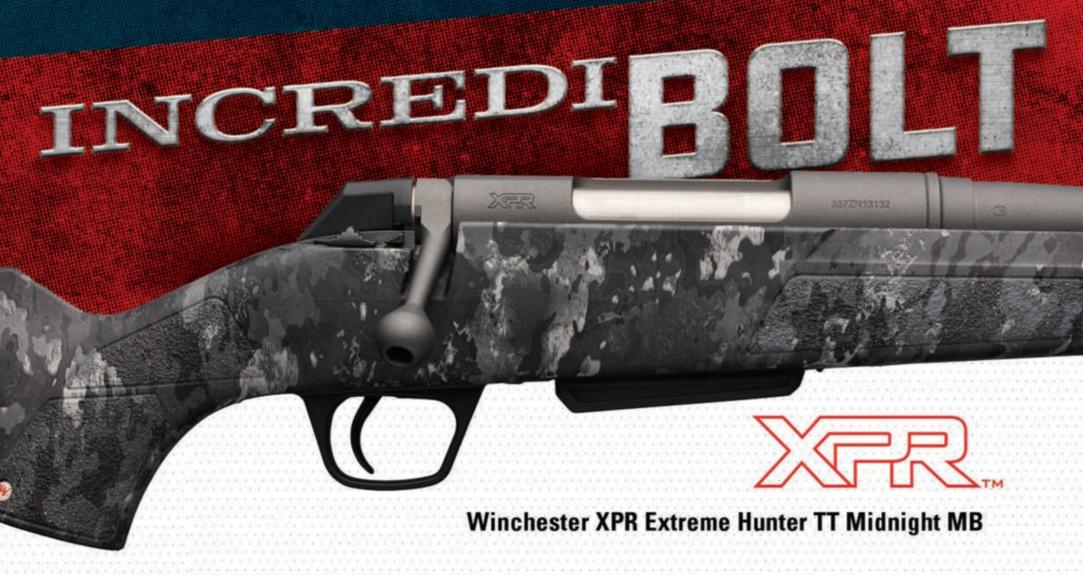
You have been given one of the best bolt-action .22 rimfires of all time."

A You have been given one of the best bolt-action .22 rimfires of all time. The Mark XXII barrelled action was made by JG Anschutz in Ulm, Germany — a company renowned for its high-grade smallbore competition rifles. The rifle is based on the

Anschutz competition Model 64 Match action and given the same trademark as the earlier semi-automatic Mark XXII. It was intended to mimic a Mark V or Vanguard and give it a big-gun feel.

It was launched in 2006 chambered in .17 HM2 and .22 LR; the .22 magnum was added later. The round-top receiver has an 11mm dovetail and is drilled and tapped for screwdown bases. The 23" chromemoly barrel is button-rifled with eight grooves and is screwed and pinned in place in the receiver.

The bolt face is recessed and the root of the bolt handle is brazed to the bolt body and acts as a locking lug. The trigger pull can be adjusted for weight without removing the



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Precision button-rifled barrel; Tungsten Cerakote finish; Free-floating fluted barrel; Recessed target crown; 9/16" x 24 threaded muzzle with muzzle brake



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Inflex Technology

Taking out the bite. One feature you will feel is the Inflex recoil pad technology which softens recoil forces and pulls the comb away from your face.













stock. The Mark XXII has a detachable five-shot magazine.

The stock is the same grade of Claro walnut used in the Weatherby Vanguard Deluxe line of centrefires and is pillar-bedded. Stock design is pure Weatherby with Monte-Carlo cheekpiece, pregnant pistol grip, rosewood forend tip and white diamond inlay.

It's a keeper all right! You have been given a rifle that you can be proud of and hand down to future generations of the Scott family.

Walnutty confusion

I find the different names for walnut quite puzzling. Two seemingly identical pieces of wood are called English or French walnut. But what is the difference between Claro and Bastogne?

— Nigel Bowman

English, French and other A European walnuts are members of the species Juglans regia. The location provides the country's designation, although most European walnut now comes from Turkey. American black walnut (Juglans nigra) comes largely from the Missouri River valley. Claro or California walnut (*Juglans* californica) comes from the Golden State, as does another species often marketed as Claro, Juglans hindsii, or Hinds walnut. When Hinds walnut and Juglans regia are cross-pollinated, the result is Bastogne walnut.

Remington Model 798 no mystery

My local gunshop traded in a rifle carrying the markings "Remington Model 798" and ".270 Win" which I bought for the bargain price of \$500. It is puzzling because it appears to be based on a Mauser 98 action. The brown laminated stock with subdued Monte Carlo is very





Excessive headspace is very likely and the cause must be found and rectified."

comfortable to use. What can you tell me about this rifle?

— Barry Cook

The Model 798 was an **1** attempt by Remington to give shooters an opportunity to own an economy-priced Mauser-style rifle. They imported Mark X barrelled actions from Zastava in Serbia in a stainless steel version. Another variation was the scaled-down Model 799 mini-Mauser in .223, .22-250 and 7.62x39mm. Remington fitted them with Model 700-style laminated stocks. The Mark X action has an excellent adjustable trigger, and these rifles represented good value for money, but American hunters and shooters didn't flock to buy them and they were soon dropped.

Pressure rings are normal

In your reloading column the term "pressure ring" of a cartridge case is often

mentioned. Can you please explain what a pressure ring actually is?

— Peter Freestone

A pressure ring is a bright ring that can be seen near the base of a fired bottleneck high-power rifle case. It provides a valuable reference point to help a handloader determine if a condition of excessive headspace exists.

Headspace is measured from the breech face to a point on the shoulder called the datum line. When the cartridge is fired pressure will push the shoulder forward until it touches this line. This is perfectly normal and necessary.

Rifles come from the manufacturer with the headspace set — averaging around 0.005". The pressure ring is normally quite pronounced on all fired cases, but if headspace is excessive, either as the result of a problem with the rifle or, more commonly, poorly adjusted sizing dies, a faint stretch mark or even a slight crack will show up just ahead of the pressure ring. This is an indication that the case is going to suffer a partial or complete head separation.

The simplest way to determine if this problem is present is to make a feeler of fine, strong wire with a tiny hook on one end and run it along the inside of the case just above the web. If there is an incipient case-head separation, it will be revealed

by a marked depression in the inside wall, which the hook on your feeler will catch.

If you feel a dent inside the case at a position that corresponds to the visible mark on the outside, junk that case since a condition of excessive headspace is very likely and the cause must be found and rectified.

.338 Marlin Express for sambar

I own a Marlin MXLR lever-action rifle chambered in .338 Marlin Express with 24" barrel, laminated forearm and buttstock, topped with a Leupold 2-7x scope. I'd like to use this outfit for sambar hunting. I have a supply of factory ammo loaded with the 200gn FTX cartridge, which Hornady rates at 2565fps. Hornady says it is capable of handling all North American big game out to 400 yards. At this distance it is still travelling at 1848fps and delivers 1517ft-lb of energy.

Could you suggest the best distance to zero my rifle and give me the trajectory and energy figures out to 400yd? A handload to duplicate the factory load?

— Trent Bishop

A For a game animal the size of a mature sambar stag, I recommend a 250yd zero. Sight-in 4" high at 100yd and the 200gn FTX bullet should be 3" high at 200, 5" low at 300 and 21.5" low at 400. Corresponding energy figures are: 100yd, 2483ft-lb; 200yd, 2098ft-lb; 300yd, 1761ft-lb; and 400yd, 1467ft-lb.

The .338 Marlin Express never caught on and isn't very popular. The only data I could find was in the Hornady manual and top velocity with the 200gn FTX is 2350fps, obtained with 43gn of AR2208. I have no idea what Hornady is loading its factory ammo with to get 2565fps.





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SPEED:

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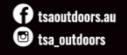
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Tony Kamphorst enjoys New Zealand at its best and worst on a





f you want to hunt Himalayan tahr, head to New Zealand in May. If you want big bulls, bad weather, and downright frightening terrain, head to the West Coast. Jeff Borg and I had done our research and decided on a seven-day do-it-yourself hunt into the Westland Tai Poutini National Park. Tony's big bull, taken in rough terrain.

NEW ZEALAND TAHR HUNTING



WITH permits secured from the Department of Conservation, we organised a helicopter to get us in and out of the mountains. We set out from the sleepy little town of Whataroa, a popular jumping-off point for tahr hunters.

The car park was full of tahr hunters, either on their way in or returning, grizzled and weather beaten. Soon the coast was rapidly falling away behind us as we flew towards the mountains. The thin belt of coastal rainforest gave way to steep faces of scrub before breaking out into the alpine tussock country. Higher still, the rock and ice of the mountain peaks faded into the sky. That was tahr country, and that was where we were headed.

In only 15 minutes the pilot dropped us on a high tussockcovered ridge and left us on our own for the next seven days.

We set up a basic but weatherproof camp and with the sun shining we were soon in our base layers and laughing and joking about forgetting the sunscreen and board shorts. We should have known better. It was mid-May and the West Coast was due for its first big snow dump of the year. The pilot had warned us of a big system coming up from the south over the next two days.

But that afternoon it was bliss - warm and clear.

We glassed a few steep, rocky faces behind our camp and picked up the first animals of the trip, a family group of tahr. We spotted one nice bull just on dark but as usual he was unreachable.

That's one thing you learn quickly when tahr hunting, that their main defence is the country they inhabit. It's rough and steep. It's all about finding the bull that you can get to safely and, if you are lucky enough to shoot him, the bull you can retrieve.

That night the weather turned and we awoke to a dusting of snow. Clouds rolled in over the peaks above camp. We headed for a ridge about three hours away that would allow us to look down into a likely looking drainage. This creek head was an amphitheatre of sheer cliff faces, shingle slides and rocky guts. Perfect tahr country.

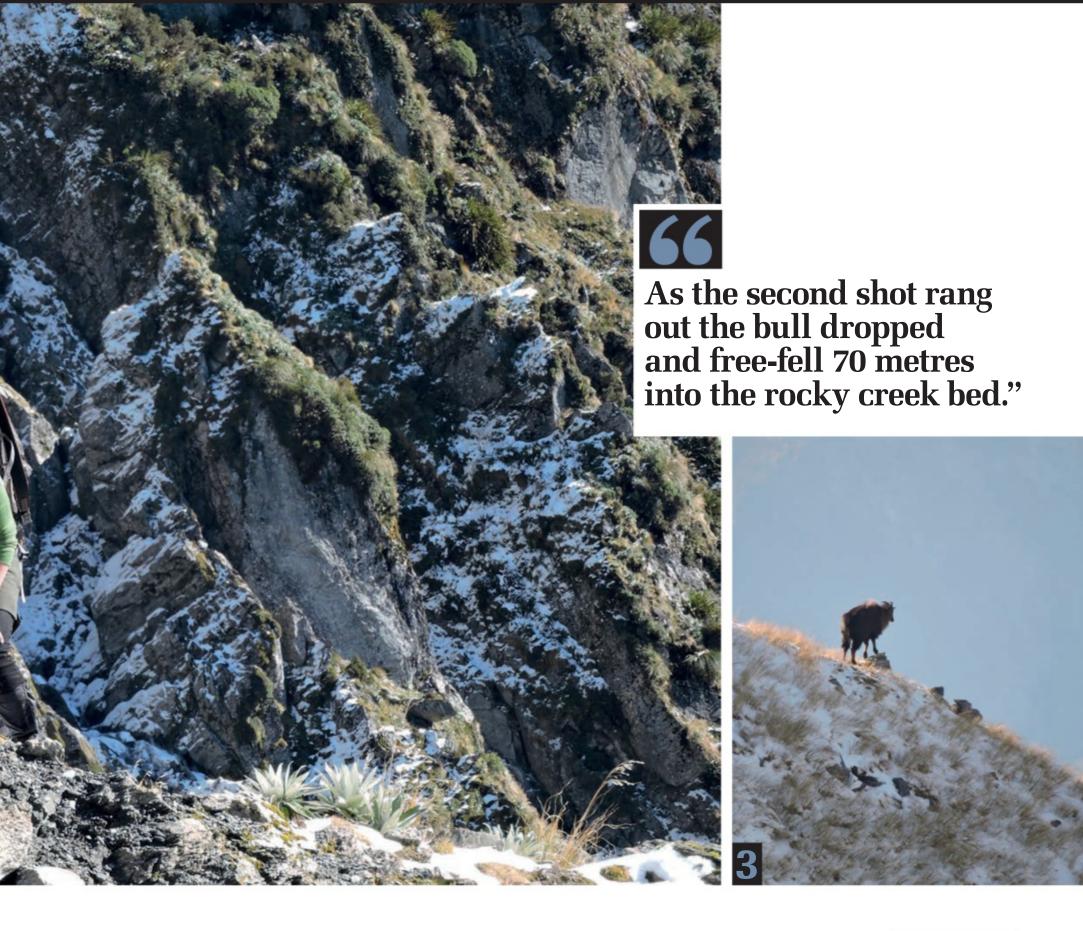
We made the ridge and after a quick glass we decided to climb higher to gain a better vantage point. As we laboured up the spur the rocky creek below us became more visible, exposing deep, shadowy guts and boulders the size of houses. A mob of a dozen tahr led by a huge bull suddenly burst out of the creek bed below us and ran up the opposite face among the cliffs. We had stumbled onto them and had to make a decision quickly.

Bull tahr can be a difficult trophy to judge, with relatively



small horns in proportion to their body size, but I didn't need to look twice at this bull. His heavy-set body and the way he moved portrayed an old herd bull, and the mane on his shoulders hung nearly to the ground. As the mob stopped its ascent of the opposite face to mill around on a steep rock face around 200 metres away I quickly got the rifle ready — Jeff's .270 Winchester — and settled in with a solid rest over my pack.

Snow and cloud drifted through my vision but as the picture cleared the crosshairs steadied on the bull's shaggy shoulder and I squeezed off the shot. The bull stumbled but miraculously kept his feet on the cliff face. I reloaded and



as the second shot rang out the bull dropped and free-fell 70 metres into the rocky creek bed.

It was a sombre reminder of what can happen when you lose your footing in this country, and we warily picked our way down through the boulders to where the bull had come to rest. He was a fine animal, nine years old, with a magnificent coat. Unfortunately the horns and scull were badly broken in the fall, but even with missing tips they still went 11 inches, and very thick.

We skinned the bull as more snow clouds rolled in over the peaks. By the time we had loaded our packs with horn, hide and meat the storm had hit in full force and

we headed for camp, arriving in a complete white-out just before dark.

That night we huddled in the tent with tahr steaks sizzling in the pan and listened to the driving wind on the walls of the tent. Temperatures plummeted and over the next couple of days we copped the worst the mountain weather could throw at us. Boots and clothes froze solid. Gas cookers refused to work. We had gambled by getting dropped in high above the tree line and now we had to deal with the consequences.

Shifting camp to lower ground was not an option as the ridge fell away below us in a tangle of impenetrable bluffs and scrub. We had to ride it out.

On the fourth day we awoke to silence. The wind was gone. The morning sun rose to reveal clear skies. It was time to hunt again. We poured boiling water in our frozen boots to make the leather supple enough to drag on to our feet, and Jeff warmed the action of his rifle over the flames of the cooker to free the bolt that was frozen solid in the action. We headed back to the rocky gully where I had shot my bull.

They don't happen often, but a bluebird day on the mountain with rifle in hand and a pack on your back is an experience like no other. The snow was glowing white, the sky brilliant blue and the only sound to break the silence was the ice crunching under our boots. We

SPREAD

Hanging Carlot for the sun's warmth on a cold morning!

2Hauling a pack in tahr country is hard work.

A bull keeps watch on a distant ridge.







Jeff warmed the action of his rifle over the fl mes of the cooker to free the bolt that was frozen solid."

ON THIS PAGE

4 Jeff climbs the ridge behind camp.

Jeff's chamois taken on the last morning.

6 Unloading the chopper with a week's worth of food and gear.

could see the ocean to the west, shimmering in the morning sun. A tangle of snow-capped rocky peaks stretched to the horizon.

The tahr were enjoying the weather as much as we were. Mobs appeared on distant ridges to soak up the sunshine. We reached our chosen gully and as soon as we peered over the skyline into the drainage we immediately spotted tahr on a small ridge top less than 100 metres below us. It was a good mob of around 15 animals, and contained a large herd bull that was all puffed up in full rut in an attempt to intimidate several younger rivals.

It was a trophy bull. Jeff manoeuvred himself into position

to take a shot. Unfortunately, a sharp-eyed nanny spotted the movement on the skyline and the mob scattered down the mountainside and out of sight. We were a bit disappointed at missing such a good opportunity on a mature bull but it was short-lived as the shrill whistle of a tahr alarm call rang out from somewhere above us.

Looking up, we were rewarded with the sight of a big, dark bull standing on a high point of the ridge, peering down at us. Jeff wasted no time and dropped the bull with a single shot from 200 metres, and as luck would have it the bull rolled down the mountain to come to rest within a few metres of us.

We skinned the bull and had a leisurely lunch on the mountain. No one was in a rush to get back to camp, and we sat in silence and enjoyed the view and the sunshine. I don't think either of us wanted that day to end. A day spent in pursuit of a challenging game animal, in good company, in wild and beautiful country.

We devoted our remaining days to hunting chamois. They favour slightly different terrain, often at lower elevations closer to the bush line and running water.

Jeff and I hunted hard from our camp, glassing all the steep, scrubby creeks and tussock faces on the edge of the bush. We saw chamois on two occasions, but both



NEW ZEALAND TAHR HUNTING





The snow was glowing white, the sky brilliant blue and the only sound was the ice crunching under our boots."

ON THIS PAGE

A bull makes his way back into the rocky bluffs.

Pushing back to camp in a snow storm.

9Jeff's tahr had a great coat.

times they were at a great distance and separated from us by impassable gorges.

Jeff's quest for a chamois spanned years. He had been here three years earlier when I secured my first chamois buck. I dearly hoped that this time we would be celebrating his success, but as the remaining days of our hunt dwindled it looked less and less likely.

It came down to our last day. We split up for a final morning hunt. I made my way to a steep gully just below camp and began glassing as the sun's first rays touched the opposite face. Movement caught my eye directly below me on the shadowed side of the gully. It was a chamois, standing on a large boulder protruding from the mountainside. Another joined it but I didn't stay and watch.

Running and climbing back past camp, I caught up with Jeff and took him back to the gully as quickly as we could go but by the time we got there they were nowhere to be seen. We picked that gully apart with our binoculars but it looked like the chamois had vanished into thin air. We were running out of time.

As a last ditch effect we decided to look over the edge running down into the main valley and there, feeding on some shrubs on the bush edge, was a chamois doe. Jeff dropped her on the spot. It was a great way to end our hunt, and to end a three-year quest for Jeff.

There were times when those seven days on the mountain had felt like a lifetime, but I don't think either of us was ready for the sound of the approaching chopper. We got a last look at the mountains as the helicopter lifted off and took us soaring down the valley towards the coast and the real world.

It was humbling to see from this perspective that the country we had covered was a mere drop in the ocean compared to the vastness of wilderness that surrounded us. Jeff said something over the comms that I couldn't hear above the throbbing of the engine and rotors, but I knew that it was the same as I was thinking: Till next time, New Zealand!





TACTICAL BY NAME, ACCURATE BY DEFINITION



STARTING FROM \$3000



6 Creedmoor (8" MRR twist) **6,5x47 Lapua** (8" MRR twist)

6,5 Creedmoor (8" MRR twist)

6,5x55 SE (8" MRR twist)

.284 Shehane (8,25" MRR twist)

.308 Winchester (11" MRR twist)

.300 Winchester Magnum (11" MRR twist)

The Sabatti Tactical EVO bolt-action rifle is the quintessential precision shooting rifle, with features that make it perfect for both sporting and professional purposes.

The steel action, with three bolt locking lugs and a fast 60-degrees bolt throw, was designed specifically for all those uses that require resistance, long service life, and accuracy.

The Sabatti Tactical EVO rifle mounts one of the best actions currently available on the global bolt-action rifles market. The cocking bolt knob is interchangeable, and the surface finish on the action and the bolt ensures a peerlessly silent and smooth operation.

The heavy competition-oriented barrel boasts Sabatti own MRR multiradial rifling pattern, whose excellent performances are highly regarded by experts worldwide. A 5/8" thread at the muzzle – covered by a removable thread protector – allows the use of a vast choice of muzzle devices.

The action of the Sabatti Tactical EVO rifle is coupled to the stock in a completely innovative manner – it's left "suspended" to float over the stock by two supports that all but eliminate all coupling tension and drastically improve shooting accuracy.





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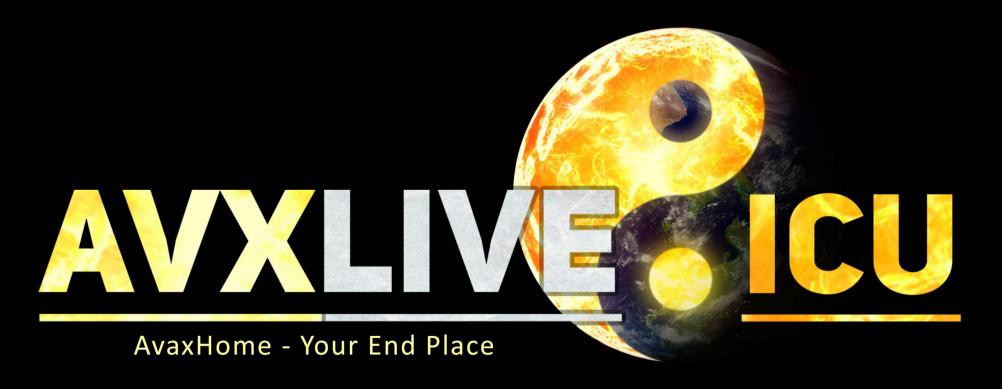
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Cold steel & carbon copy

Bergara's line of bolt-action rimfires are nononsense hunting tools with high-end features and excellent accuracy at a bargain price.



LAST year I reviewed the Bergara B-14R, a rimfire training model that simulates the company's centrefire B-14 HMR (Hunting & Match Rifle), a rifle built on the Remington 700 footprint which was intended for both hunting and match applications. The B-14R had a quasi-tactical stock with integrated mini-chassis and a short No. 6 contour bull barrel. With an overall length from 970mm to 1010mm depending on the barrel length, and a weight of 3.7kg together with over-large dimensions, the B-14R didn't hold a lot of appeal for Aussie small-game hunters. They preferred to await the arrival of the Bergara Micro Rimfire (BMR) series, which is lighter and handier in the traditional rimfire mould.

Like the B-14R, the BMR is available in two models, Steel and Carbon. Both have a 460mm No. 6 taper barrel, one made from 4140-steel and the

This robust rimfire action appears to be more or less a miniature version of Bergara's B-14 centrefire action."

other with carbon-fibre wrapped barrel. Both barrels are threaded 1/2"-28 and have a thread protector. Both models are also produced with a 510mm (20") barrel option, which increases the rifle's overall length from 915mm to 965mm. These twin guns are chambered in .22 LR, .22 WMR and .17 HMR.

The BMR stock on the Steel version is grey with splashes of black, while the Carbon model's stock is black with splashes of white. The Carbon weighs 2.3 to 2.4kg, and the Steel is just a shade heavier at 2.5 to 2.6kg.

My own preference for nicely

figured walnut and hand-cut checkering has been satisfied by several high-grade rimfires, and I am careful to handle them with care. They may not be exposed to the same kind of rough treatment in the field that my centrefire rifles sometimes endure, but they still cop their share of dents and gouges. Therefore, I am of the opinion that a synthetic stock like those on the BMRs is better suited for the average hunter.

ABOVE: Both Bergaras have good-looking, well-shaped stocks that are easy to hold steady offhand and in other hunting positions.







Bergara Micro Rimfire

Manufacturer: Bergara, Spain

Action type: Bolt-action repeating rimfire rifle

Calibres: .17 HMR, .22 Long Rifle, .22 WMR

Receiver: 4140 chrome-moly steel

Stock: Synthetic. Carbon black with white flashes; steel grey with black flashes

Barrel: Carbon-fibre; 4140 steel; six groove, 1:16" R/H twist

Magazine: Detachable, comes with a 5-shot and a 10-shot

Trigger: Bergara Performance Trigger; single-stage, adjustable

Sights: None; 30 MOA picatinny rail

Overall Length: 460mm (18" barrel); 920mm (20" barrel)

Finish: Matte blued

Price (indicative only): Carbon \$1150; Steel \$1000

Distributor:

Herron Security & Sport, 02 9417 3388, herrons.com.au

The BMR stock has simple, classic styling with a high, straight comb that slopes upward toward the butt to support the shooter's cheek. A gently curved pistol grip with a circumference of 134mm is a perfect fit for my small hand and the base of my thumb fits comfortably into a dish in the nose of the comb. The forend is not too thin, nor too thick, and is more rounded than flat on the bottom. Hence it is comfortable to grasp in the offhand position, making the rifle easier to hold steady. Moulded stippled panels front and rear replace checkering but add only minimal grip purchase.

Stock furniture consists of a pair of swivel bases and Bergara's Inflex recoil pad. The soft recoil-absorbing buttpad isn't really needed on a rimfire but it is a welcome addition.

The slab-sided receiver has a length of 163mm and has girder-like strength; the sidewalls are 8mm thick on both sides of the magazine well and the recoil lug is an integral part of the receiver 'ring' which has a hole in the right side to vent any escaping gas — a rare event with modern rimfire cartridges, with the possible exception of the .17 HMR.

66

The Bergara Performance Trigger is an unusual refinement to find on a rimfire rifle, the same unit that graces the centrefire rifles."

Instead of using the trigger sear as the bolt release,
Bergara has gone one better and incorporated the same rocker-type bolt release it uses on its centrefire rifles, in which a spring-loaded steel lug engages a slot machined in the left side of the bolt body. A flat section milled out on the left side of the action carries the Bergara name and logo.

The loading and ejection port measures 42.28mm long with a width of 10.38mm and the opening for the magazine is 44mm long. The top of the receiver is rounded and the rifle comes with a picatinny rail 126mm in length which extends out over the chamber section of the barrel. This rail allows plenty of latitude when attaching a pair of ring mounts, and adjusting eye

relief is less of a chore.

This robust rimfire action, then, appears to be more or less a miniature version of Bergara's B-14 centrefire action.

The bottom 'metal' is black polymer and incorporates the trigger guard, magazine well and magazine release. The unit is held to the barrelled action by a pair of screws; the front one threads into the recoil lug and the rear one into the stiff rear tang.

The Bergara Performance
Trigger is an unusual
refinement to find on a rimfire
rifle. It is the same single-stage
unit with integral twoposition safety that graces the
company's centrefire rifles.
A knurled push-button on the
right side of the tang allows
the bolt to be opened to clear a
live round from the chamber







with the safety engaged. The trigger is adjustable from 2-4lb (0.9-1.8kg), and comes from the factory with a totally inert 3lb (1.36kg) let-off.

The bolt is the familiar half cutaway type found on the majority of rimfire rifles. At 137.5mm overall, it has a sculpted shroud with a protruding red cocking indicator. The actual bolt body is 36mm long and is attached to the longer 62mm head section. The bolt body assembly shows excellent machining and is numbered to the receiver.

The bolt has dual locking lugs, but is different to the B-14R which has a floating head with dual opposed locking lugs mid-bolt like the Ruger 10/22. The BMR also has dual lugs — one lug located on the front of the rounded rear

section of the bolt body turns into a recess in the left side of the receiver and the root of the bolt handle turns down into a notch in the side of the receiver.

The bolt face contains a shallow recess for seating the .22 case rim, with twin side-mounted extractors and a firing-pin hole at 12 o'clock. The floating head remains in place when the bolt body is turned into battery. The bolt handle is gracefully bent and swept back slightly. It has a pear-shaped polymer knob that's easy to grasp.

The bolt has 60 degrees of lift and it cocks on opening. Bolt lift is easy and the action is smooth to operate from any practical field or shooting position. There is an anti-bind rail on the bottom of the bolt body that allows the action to

work smoothly. The bolt handle is properly shaped, as it is swept and protrudes just enough for an easy grasp. The shape of the bolt handle allows for easy scope mounting, even for larger scopes like on the Carbon model as tested.

Bergara's precision barrels are rifled with a 1:16 twist, are free floating and feature a recessed crown. The bore is lapped to a mirror finish, which is critical to prevent fouling with lead bullets. The match-grade chamber on both rifles readily accepted all of the various ammunition types tried.

Bergara says the BMR is designed for those who demand the best and expect nothing short of perfection. With field and match performance in mind, the BMR comes with two

ON THIS SPREAD

The Steel is shown taken down into its major parts.

2 Stock is synthetic, moulded to be a close fit to the barrelled action. Forend has reinforcing struts.

The Bergara BMR's massive rimfire action has an integral recoil lug and is fitted with the company's Performance Trigger.

The two BMRs are identical except for the barrels and stock colours.





ON THIS SPREAD

5 The BMR's action includes a 30 MOA picatinny rail to enable scope mounting.

6 Steel has a Sightron 3-9x32 1" rimfire scope in DuraSight quick detachable rings making a well-balanced outfit.

Most unusually, during the expenditure of 250 rounds from each rifle, there was not a single flier."

magazines, a five-shot and a 10-shot for running stages at your favourite rimfire match. All of this is certain to make it appealing to traditional and modern hunters.

For testing, the Steel model had a Sightron SI series 3-9x32 rimfire riflescope with a crosswire reticle, using DuraSight Q/D scope rings. This scope features a onepiece, one-inch main tube, .25 MOA click adjustments, has parallax adjusted for 50 yards, 3.6 inches of eye relief, and fully multi-coated scratch resistant lenses for increased light transmission.

The Carbon BMR was matched with a Sightron S-TAC series 3-16x42 with 30mm main tube, fine Duplex reticle, capped target turrets, side focus, 3.4" eye relief and European-style focusing eyepiece. This is a big scope for rimfire hunting, but mounted in steel Weaver-type rings, it didn't look out of place on the BMR with thick carbon-fibre barrel.

At the range, both rifles behaved in an exemplary fashion throughout testing. Bolt travel was smooth, the twin extractors worked positively throughout the testing sessions and the lightweight firing pin resulted in fast lock time. A consistent trigger pull, free of creep, broke cleanly. Accuracy was consistently good.

Most unusually, during the course of firing five-shot groups and the expenditure of 250 rounds from each rifle, there was not a single flier. This wasn't surprising since we stuck with highly regarded target ammunition including Eley Tenex, Club, Edge and Match, as well as Sellier & Bellot, Lapua Midas L and RWS Long Range Match, among others. To satisfy my curiosity, I added three highand hyper-velocity rounds — CCI Mini-Mag and Velocitor and Remington Yellow Jacket.

Of the match loads tried, Eley Tenex (40gn lead RN) was the most accurate, with average group sizes measuring 0.325" in the Carbon and 0.424" in the Steel. Some of the other match cartridges ran close to the Tenex.

Switching to hyper-velocity copper-plated performance and hunting loads, results were interesting. The CCI Velocitor GSHP 40gn at a nominal 1442fps shot average group sizes measuring 0.828" in the Carbon and 0.879" in the Steel. The best of the hyper velocity loads was the Remington Yellow Jacket firing a 33gn truncated-cone BHP at 1526fps, which produced groups measuring 0.757 and 0.782.

CCI's Mini-Mag with a 36gn bullet at 1269fps averaged groups of 0.650" and 0.732" respectively. Full accuracy results are shown in the table.

After working with the Bergara BMRs over the past few weeks, I became very impressed with both of them. They are reliable, well designed, accurate, have outstanding trigger pulls and lots of appeal. Each model fulfils its intended purpose very well. Considering their features, they are bargain priced.

Due to consumer demand in recent years, bolt-action rimfire manufacturers have concentrated on improving accuracy and have begun offering models that will appeal not only to hunters, but also competition shooters. The Bergara BMRs offer a choice of barrels and their accuracy will appeal to demanding traditional and modern shooters alike.

ACCURACY RESULTS (50YD) Velocity Average group .22 LR Cartridge (fps) (inches) Carbon Steel Rifle rifle Sellier & Bellot Rimfire 38gn HV HP 0.581 1329 0.561 Sellier & Bellot Club 40gn Lead RN 1075 0.543 0.586 Fiocchi Match 40gn Lead RN 1157 0.526 0.562Eley Tenex 40gn Lead RN 1106 0.325 0.424 Eley Edge 40gn Lead RN 1133 0.439 0.541 Eley Club 40gn Lead RN 1135 0.535 0.563 Lapua Midas L 40gn Lead RN 1110 0.556 0.588 SK Long Range Match 40gn Lead RN 1126 0.619 0.630 Dynamit Nobel R50 40gn Lead RN 1057 0.437 0.479 Dynamit Nobel Rifle Match 40gn 1074 0.500 0.554 Lead RN CCI Velocitor 40gn Lead HP 1442 0.828 0.879 Remington Yellow Jacket 1526 0.757 0.782 33gn TC HP CCI Mini-Mag 36gn Lead HP 1269 0.650 0.732

Measured average velocity for 10 shots over a Chrony chronograph at 3m. Accuracy is the result of five consecutive five-shot groups at 50yd from a sandbag rest. Temperature 24C. Abbreviations: TC (truncated cone), HP (hollow-point), RN (round nose).





Rimfire proportion

Sightron's new riflescope is specifically designed and engineered for the .22 LR and is a serious aiming device for hunters looking to be more accurate on varmints or small game, and it is affordable.

GONE are the days when the hunter's .22 rimfire rifle was likely to be topped with a hazy-lensed, ¾" special bought for 10 bucks at his local gunshop. This didn't really make much sense because the .22 is a gun shooters use more often and fire many more rounds through compared to a centrefire rifle.

Nowadays there is a choice of scopes that have been designed specifically for rimfire rifles. To gain your .22 LR's maximum accuracy and effectiveness it should be equipped with a scope at least as good optically as the one you have on your centrefire. I cringe whenever I see a shooter carrying a high-quality rifle like a CZ 457, Anschutz 1710D Custom or Browning T-Bolt topped with some el cheapo brand of scope that can hardly be seen through.

Even back in the 1950s, however, it didn't make any sense to fit an inexpensive 3/4" Field or a Bentley when you could have a Pecar 4x Junior with superior optics, albeit at a higher price.

There is still some confusion about the differences between .22-specific scopes and

ON THIS SPREAD

Adjustment dials are capped and graduated in increments of ¼ and 1MOA.

2 Eye relief is long and non-critical, which combined with a bright image gives superior performance.



centrefire scopes, and about which type of scope is most appropriate for a .22 rimfire rifle. Let's try to cut through some of this confusion and see how you can equip your rimfire with an optic that's every bit as good, with the same quality as the scope you have on your centrefire.

This is necessary if you want to use your .22 to the full extent of its capabilities. Within its 100-metre effective range, any well-made .22 rifle is capable of accuracy as precise and consistent as any high-power rifle within its effective range.

The Sightron SI-Hunter 3-9x32 fulfils all the criteria I consider necessary in a rimfire scope to be used solely for small game hunting.

For a start, it is scaled. Many manufacturers have no sense

of proportion. The scopes aren't matched to the slim, trim lines of the average rimfire sporter used for plinking, casual target shooting and small game hunting. Unless you're pursuing rimfire metallic silhouette or some other rimfire target competition where variable power scopes with large diameter tubes and target knobs offer an advantage — the working rimfire scope should be a slimmed down version.

The Sightron SIH is perfectly scaled to suit a rimfire rifle, with a length of 28cm (11 inches) and a weight of 330 grams (11.6oz). It has a generous 91mm (3.6") of eye relief. Its field of view at 100yd ranges from 31.1ft to 12.2ft (ie, at 91m, 9.5-3.7m). It is waterproof, fogproof, shockproof and has



fully multi-coated lenses. The crosswire reticle is in the second plane.

The Sightron has a one-inch main tube with 32mm objective lens. On the lowest power (3x) it has an exit pupil of 10.66, reducing to 3.5 at 9x.

A scope with an exit pupil of about 3.0 provides adequate brightness when used in full sunlight on an open target



range, but if used for hunting in dim conditions or at dawn or dusk, its image would be dimmer than what your eye would be seeing. This is because the pupil of your eye would have expanded to let in more light than the scope is capable of transmitting. However, Sightron's Zact-7 Revcoat lens coatings maximise light transmission for premium

low-light performance.

Scopes intended for use on centrefire rifles are usually adjusted to have no parallax at 100yd. A scope designed for use on a rimfire rifle should be set to be free of parallax at 50yd. The Sightron SI rimfire 3-9x32 conforms to the 50-yard parallax setting.

With the typical centrefire riflescope, parallax is not a

The Sightron SI-Hunter is perfectly scaled to suit a rimfire rifle, with a length of 28cm and a weight of 330g."



problem. For example, a typical 4x scope set to be parallax free at 150yd has a maximum parallax error of .182" at 200yd, .547" at 300, and 1.27" at 500. This poses no problem for the hunter making a 300yd shot at a deer.

If the same scope were mounted on a .22 LR sporter for small game hunting, its maximum parallax error at 50yd would be .36" and .455" at 25yd (probably the average distance for .22 shots fired at rabbits). Put simply, the smaller the target and the closer you shoot, the more of a problem parallax focal error and focal zero can become, particularly if you choose a one-inch centrefire scope for your .22 rimfire.

The scope has 0.25 MOA click adjustments. A minute of angle is one sixtieth of a degree. On a target at 100yd the distance represented by a change of one MOA at the firing point amounts to 1.047", close enough to an inch that the difference is insignificant in a .22. One click amounts to 0.262" (0.665mm) in one instance and 0.250" (0.635mm) in the other and makes no discernible difference. One revolution of the windage and elevation dials covers 15 MOA and full travel is 70 MOA.

To keep it affordable, the Sightron lacks an illuminated reticle, zero-reset turrets or BDC, all of which would add to the price. But does the average small game hunter need these refinements? I think not. However, I'd have liked a fast-focus eyepiece, like other SI-H scopes.

ON THIS PAGE

The SI-H 3-9x32 scope is better proportioned for a hunting rimfire than larger scopes intended for rimfire competition.

The power ring has a thumb rest. Focus is set by rotating the eyepiece, which has a lock ring.





Within its 100yd effective range any decent .22 rimfire rifle is capable of accuracy as precise and consistent as any high-power rifle within its effective range. The targets fired at with .22 LR may be closer than those fired at with, say, a .22-250 or .243, but they require even greater precision in shot placement than do most centrefire targets — a small pest bird at 75yd, or a head shot on a rabbit at the same distance.

The point blank range for the standard velocity .22 LR is approximately 75yd, the high velocity round about 85yd. Sighted in for 75yd using one of the high-speed .22 LR 40gn loadings at a velocity that averages 1250fps, the bullet lands about one-half inch (1.3cm) high at 50yd, and drops about 4" (10cm) at 100.

Powerhouse .22LR cartridges like the CCI Velocitor (1435fps) and Remington Yellow Jacket (1526fps), even at a range of 100yd, have a remaining energy of 110ft-lb, which is about the same as a standard velocity round produces at the muzzle. Both of these speedsters can be sighted in to zero at 80yd and drop less than 2" (5cm) at 100. The Sightron 3-9x32 allows the shooter to see small targets more clearly and aim precisely enough to score kills out at 150yd using a little holdover.

The Sightron was used to test the accuracy of the Bergara B-14 BMR reviewed in this issue, with several types of target and

I'm impressed with its robust design, overall quality and optical clarity."

match ammunition, and the Bergara delivered multiple ragged holes measuring half an inch and less.

After working with the Sightron SIH 3-9x32 I am impressed with its robust design, overall quality and optical clarity.

The Sightron SI-Hunter series is available in seven different models with different reticles including a duplex-type. In addition to the 3-9x32, there's a 1.75-4x32 and a 3.5-10x50. All except the 3-9x32 are parallax-corrected at 100yd. They're made in the Philippines and I'd have to rate Sightron's SIH series higher than entry level maybe second or middle tier. With a price tag of around \$395 the new 3-9x32 is one of the soundest values in the rimfire scope world.

Sightron is distributed by Herron Security & Sport, 02 9417 3388, herrons.com.au.



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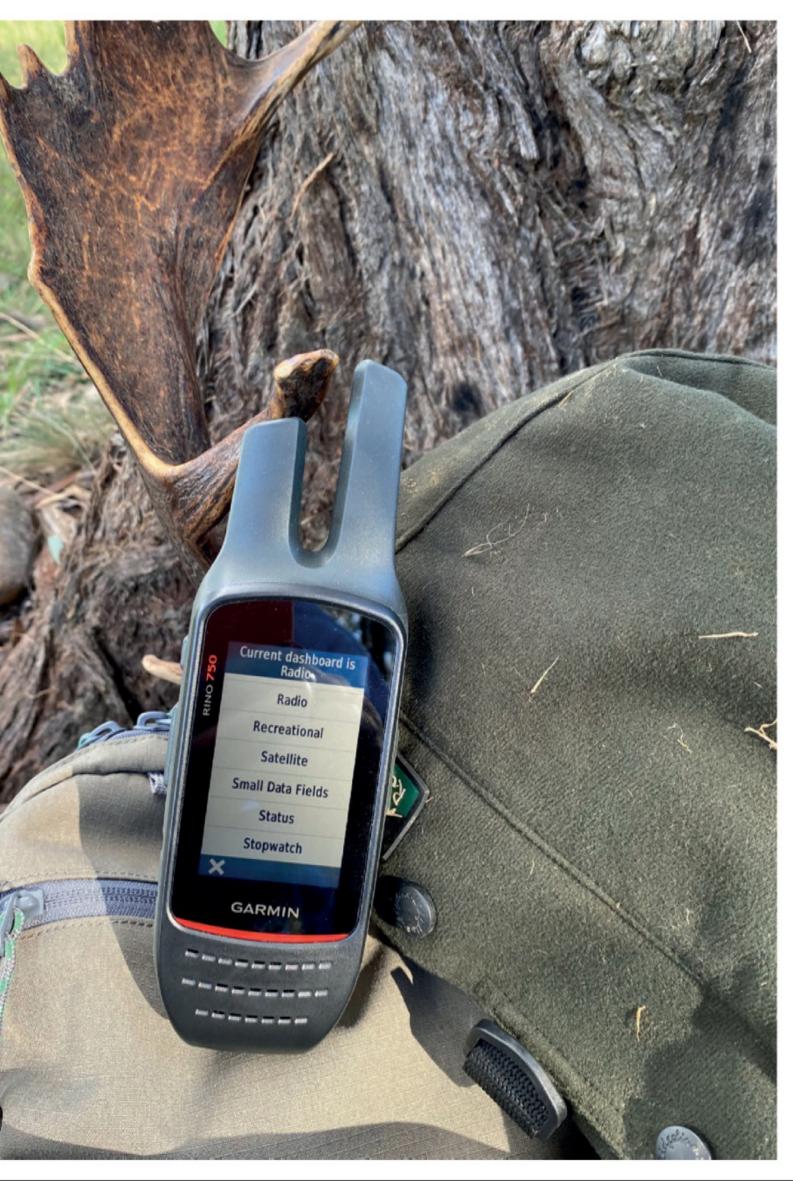


B22012 GAUGE WALNUT SERIES





In touch and on track



Garmin combines UHF and wireless communication with its longestablished GPS prowess in the Rino 750.

NOT long ago I used to carry a pair of binoculars for spotting game and a separate rangefinder to calculate the distance. These days, however, I have a good pair of binoculars with built-in rangefinder, reducing weight while having both items at my fingertips at the one time. The same convenience is now available for another pair of essential devices that many outdoorsmen carry. Garmin's Rino 750 is an all-in-one, two-way radio and GPS unit with a host of other valuable features.

Offering UHF radio capability and GPS navigation in the one unit, it's a weight saver for hunters who would carry both. Whether you hunt with friends or simply want a bit of security in new or remote areas, the Garmin Rino 750 is indeed a great choice.

The UHF features 80 channels with a maximum power output of five watts, but you can switch back to 2W or

ON THIS SPREAD

Using the UHF radio, an excellent addition to the GPS functions.

Widgets make it very simple to choose between options for the Garmin Rino 750.

Peer-to-peer tracking shows you where your companions are, which is a benefit for safety in the bush.







even 1/2W output in close-by areas or flat country where line of sight will enable reception at longer distances. This in turn will also preserve battery life.

Similar to a normal UHF radio, other features include push-to-talk button, volume control, Bluetooth connection and even privacy channels. The Rino 750 is compatible with most standard 80-channel UHF radios, but additional features are available when using this radio with another Rino 750.

For example, it can track other Rino users, including older models like the Rino 650. This peer-to-peer positioning allows you to track others' movements and locations, which is set when you press the talk button via the UHF. This location information is sent once every 30 seconds and I'd imagine would work well on driven hunts or simply to know

I called Mick to let him know I'd got a buck, to which he replied and immediately had my location marked on his unit."

exactly where your hunting mates are in the same area.

On a recent trip away with my son Mick, we put a pair of Rinos to the test and found they worked brilliantly. This was during the fallow deer rut so we both decided to split up and check out as many croaking bucks as possible before they stopped croaking for the morning, as we'd heard numerous bucks from camp.

To cut a long story short, I was lucky enough to get onto a nice buck first and took the shot. Shortly after, I called Mick on the Rino 750 to let

him know I'd got one, to which he replied and immediately had my location marked on his unit, allowing him to track across to where I was located in thick bush. How amazing is that, I thought to myself.

The fact we were both carrying Rino 750s made the hunting a lot safer, I believe, as we each knew exactly where the other was located if and when taking a shot.

The Rino 750 can be sync'd with a number of other units, apparently, so if hunting with a party of, say, four or five others, you can each

communicate your locations for safety purposes.

Not only can you mark waypoints in the Rino's GPS, you can also pass on those waypoints to another device. It could be a fresh wallow, or perhaps a meeting spot for lunch; the scope is endless.

Which leads me to another excellent feature, called Sight 'N Go. This will allow you to point your radio at a specific location, plot its coordinates and send them to another radio user. This would work well in pinpointing an animal you've shot, perhaps on an opposite face, allowing you to plot where it is before venturing across to look for it. I can't tell you how many times I've taken an animal on a faraway, scrubby hill, only to find that when I got there it all looked quite different, resulting in lost or hard-to-find quarry.

The Garmin Rino 750 has a 76mm (3") touchscreen GPS and a worldwide base map





Sight 'N Go allows you to point your radio at a specific location, plot its coordinates and send them to another user."

already included, however, facility to add additional storage and a MAPS upgrade is also available via a micro-SD card. These optional maps, such as BirdsEye Satellite Imagery, will give you enhanced topographical detail and all you need to know about the lay of the land when out bush; and also points of interest, directions and street maps when in the big smoke.

I installed the Garmin TOPO map, a pre-programmed data card by Garmin. These cards include one for Australia and New Zealand combined or, alternatively, other countries throughout the world. I'm yet to try it over on the west coast

of NZ, where I frequently hunt for chamois and tahr, but look forward to giving it a go soon.

Here in Australia, it worked as expected. The MAPS upgrade is a real game changer for serious hunters who want the finer details of where they are, what's around the corner and identifying likely faces that could hold game thanks to its elevations, contours and more.

The Garmin Rino 750 comes complete with a belt clip, power adaptor, mini-USB cable and the battery unit. It is rugged, waterproof and offers an altimeter, compass and barometer, to name a few. You can also wirelessly share your tracks, routes and geocaches with other compatible Garmin handheld devices and even send unit-to-unit text messages to Rino users nearby, so you won't spook the game. Other features include dual GPS and GLONASS satellite reception, offering emergency reports, active weather updates and lots more.

I've never considered myself much of an electronic device guru, but a day or two in the bush with the Rino 750 was all it took to learn the ropes and make use of its many features and benefits. I'm sure there are still a few options available that I haven't explored yet, but one thing's for sure, the most important factors to me are the safety aspects, knowing where I am and being able to make contact with someone else in an emergency.

To find out more about the Garmin Rino 750 ask at your local gun shop or Garmin dealer. For more information visit www.garmin.com.au.

ON THIS PAGE

4 Marking waypoints on the Rino 750.

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Pieces of the puzzle

Hunt harder or hunt smarter? Dylan makes his choice.

SUCCESS in the field is usually linked to how much time you spend in the bush. Sooner or later, you'll cross paths with something you're chasing, if you're in an area that holds some game. I've flogged my guts out for weeks on end and felt that I was wasting my time, only to have my luck turn around in an instant at the last minute and make me feel that everything was worth it.

The more I do this, the more I try to be smarter with how I approach my hunts. Most of my success over the past couple of years has felt more intentional and I can put it down to more effective

scouting and taking notice of things that matter.

Many of the opportunities I used to get in the field were easy to capitalise on when I was carrying a rifle. A typical hunt for me was trudging through some new country – carelessly – spooking some game out of the thick stuff and shooting it when it stopped running to have a quick look back towards me.

It didn't always work like that, and I didn't want things to go that way, but once I had a critter on the ground, I had what I wanted.

Nowadays, I spend more time carrying a traditional bow with me and my old



strategy doesn't work. To have a chance in most cases, the game can't know I'm there. For this reason, I've started taking much more notice of my surroundings and have done everything in my power to *know* where the game will be, rather than guess or hope. I need to capitalise on every opportunity that I am presented with.

Trail cameras have played a big part in my hunting. They can tell you how much game you can expect to find in a spot, and when you can expect it to be there. My favourite time to run cameras is from mid-summer through to late April, to predict where

I will see the most rutting activity from fallow bucks in my area. Every year like clockwork in the first week of March, bucks arrive from who knows where and spread themselves around.

In other circumstances I've used cameras to predict the movements of problem animals that a farmer has asked me to sort out.

When I first started using trail cameras in good country, I was just excited to see game animals at all. Now I'm recognising individual animals in different spots and trying to think about how I might come across them in the right circumstances.

Depending on the time of year and environmental conditions this can be a huge pain or relatively easy.

In any case, developing a detailed understanding of the environment and movements of animals is always time well spent. Each time I set out to check a trail camera I'm excited at the possibility that I'll see something fantastic, while hoping that my scouting has been effective and that I've put it in a good spot to begin with.

Until next time, enjoy living your wilderlife.

Follow Dylan on Instagram at '_wilderlife_'



ON THIS PAGE

A mature buck working his way through some pines.

2Dylan checks a camera, keen to see what it has captured.















Why didn't the pro-gun parties do very well at this last federal election?

THERE are many ways to look at the result of the recent federal election, but few of them are particularly good news for shooters. While the fact that Labor or the LNP were going to end up in government was a foregone conclusion, I don't think any of us were expecting Labor to get the 76 seats they needed for an outright majority in the lower house — and given their gentleperson's agreement with the Greens (who picked up four seats), they're more than home dry on numbers.

What's most disappointing is that while the non-majors vote was extremely high (around 30 percent of '1' votes were for someone besides the major parties), it still hasn't translated to pro-gun or even pro-liberty MPs, with the one notable exception being Bob Katter in Queensland.

Some of this was no doubt due to voter confusion. We fielded a lot of comments by people who thought the pro-gun Liberal Democrats were somehow connected to the "responsible for the 1996 gun law changes" Liberal-National Party, for example. A lot of the parties didn't do themselves any favours by running ghost candidates — people no-one had ever heard of, weren't known locally, and who didn't put much (if any) effort into campaigning.

It still comes down to the votes, though, and it's clear a lot of shooters decided — for whatever reason — to vote for the majors, and until that line of thinking changes we're all going to continually find ourselves asking why we can't make any political headway.

The saving grace for shooters is that firearms legislation is, by and large, a state issue. Yes, the federal government is responsible for import legislation and the National Firearms Agreement itself (which flows on to the states) but the implementation of those laws is very much for the

states — which is why it remains critically important to make sure as shooters that we are politically informed and holding our elected representatives to account at all times.

All those '1' votes going to independents and minors translates to literally millions of dollars that isn't going to the majors in election funding, so that represents another silver lining. You can bet there are some very unhappy party treasurers out there at the moment.

We can also take heart knowing the country has some fairly significant issues that need the Labor government's attention more urgently than firearms laws — for example, housing affordability and employment, plus the fact the party supporters expect them to take action on climate change-related matters, too.

The lessons learned from this federal election will hopefully allow us to better The lessons learned from this federal election will hopefully allow us to better target our messaging for state elections."

target our messaging (including who we support) for state elections. We'll certainly be doing plenty of analysis over the coming weeks and months.

One other thing that has come out of this is reiterating how absolutely critical it is for shooters to roll their sleeves up and actually get involved with political parties.

Prominent Australian firearm vlogger Ozzie Reviews summed it up perfectly in a video a few days before the election: there are always heaps of people ready to help the Greens or the majors with door knocking, standing on the side of the road with signs, handing out how-to-vote cards etc, but when pro-shooting parties ask for help there's a litany of excuses. "I'm working that day." "The kids have sport." "My spouse will be mad at me."

The supporters of the major parties and of the Greens find ways to get out, get involved and help their parties succeed, instead of making excuses — and when shooters can do that, too, there's no telling what sort of positive outcomes we can bring about.

Graham Park is the president of Shooters Union Australia.



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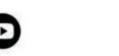
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300 WSM	150	3260 fps
308 WINCHESTER	150	2820 fps
350 LEGEND	150	2325 fps
7MM-08 REMINGTON	140	2612 fps
7MM REMINGTON MA	G. 140	3100 fps

















"We all know the pain of being unable to get that one elusive fox that just won't play the game," Cam Prescott says. "I've seen this vixen in the same spot about six or seven times over the past few months. She is always moving, doesn't respond to the whistle and runs off in the scrub when we get within shooting range. The saying 'cunning as a

"With a freshly sighted in .223 and a new whistle to the collection, I was as ready as I could be. My mate Sam saw her eye shine from about 400m back and the new whistle piqued her interest enough that we could slowly close in on her without scaring her off. We had a slight dip in the terrain to cross, over which we lost sight of her. As we came up out of the dip, she had started her escape but stopped at about 200m out, to the sound of this new whistle. It was now or never.

"A quick steady-up and a pull of the trigger dropped her instantly. The Fiocchi 50gn Polymer Tip did it's job perfectly. Gotcha! I was bloody stoked



Nathan Townsend came across this pig in Merrygoen. "Between having my annual boys' trip to Queensland cancelled two years in a row, and the drought prior to that, this was the first pig I had managed to shoot in four years!" he says. "The .223 and the Fiocchi ammunition dropped him on the spot. It was great to finally break the drought!"



BROUGHT TO YOU BY TSA Australian distributors for Weatherby **OUTDOORS** Firearms and Fiocchi Ammunition



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"Over Easter we were fortunate enough to visit a friend in south-east Queensland and catch the very last of the roar," Paul Lindenmayer says. "We only heard a couple of stags so spent our time watching hinds. Eventually the resident stags would be seen if we were patient enough. This was the best stag we could find and the 130-grain Fiocchi ammo did the trick. At about 200m it destroyed the front half of his lungs and he barely made it 20m. It was a great weekend spent with my son and a couple good mates."



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THREE MONTHLY RUNNERS UP **WILL WIN A CAP AND** STUBBY HOLDER!







Ally nailed the wild dog from only 40m with a single shot from the .22.

The early dog

Ally Glasby lays the perfect ambush to claim her first wild dog.

AFTER camping, hunting, shooting clays, barbequing and the celebrations of New Year's Eve with friends and family, we enjoyed an uneventful, quiet New Year's Day, soaking up the hot summer sun. We decided to stay an extra couple of nights to squeeze in a little more hunting after an unsuccessful few days leading up to New Year's. This decision proved to be the right one.

I left my two-year-old son with my husband and ventured out to do a solo stalk onto a pig carcass where we had trail cameras set up. The cameras had shown excessive numbers of wild dogs.

At about 3pm, camo'd up and hiking boots on, I ventured out to sit in the sun, watching and waiting with the company of about 200 flies. According to the images from the past week on the trail cameras, the dogs weren't due to come in until at least 5pm. Having arrived at 3pm, I had plenty of time to get into position and wait. The wind was blowing perfectly in my face and to my surprise a magpie at about 400 metres broke the silence of the bush at about 3.30pm.

My eyes zeroed in to see it swooping a wild dog that was trotting along an old bush track and heading straight towards the pig carcass and I. With my heart beating through my chest and uneasy hands holding the rifle I tried to stay as still as I could, waiting for the dog to close the distance. Looking from scope to open sight and back to scope again I watched it come trotting playfully along the track, tail wagging. Although it only took minutes, it felt like a lifetime before the dog arrived at the pig and started to eat.

After being caught completely off guard with the dog coming in so quickly, I slowly moved to a position that was comfortable to shoot, using my knee as a rest for my shaking rifle. I waited for a perfect broadside shot, as I was only shooting with a .22 from about 40 metres out. I squeezed the trigger at the end of a long and nervous exhale.

The dog yelped, flipped and fell about two metres from where he'd stood only two seconds prior. He lay there, expired. To my shock I had finally done it — I had finally shot my first wild dog.

Growing up in a family that hunted and trapped, it was never me that got to pull the trigger. Having always seen plenty of dogs and other varmints hit the deck, this was one species I had never had the chance to shoot for myself, until now.

The adrenaline, excitement and feeling of accomplishment hit me hard. I had finally proved myself as an amateur hunter.

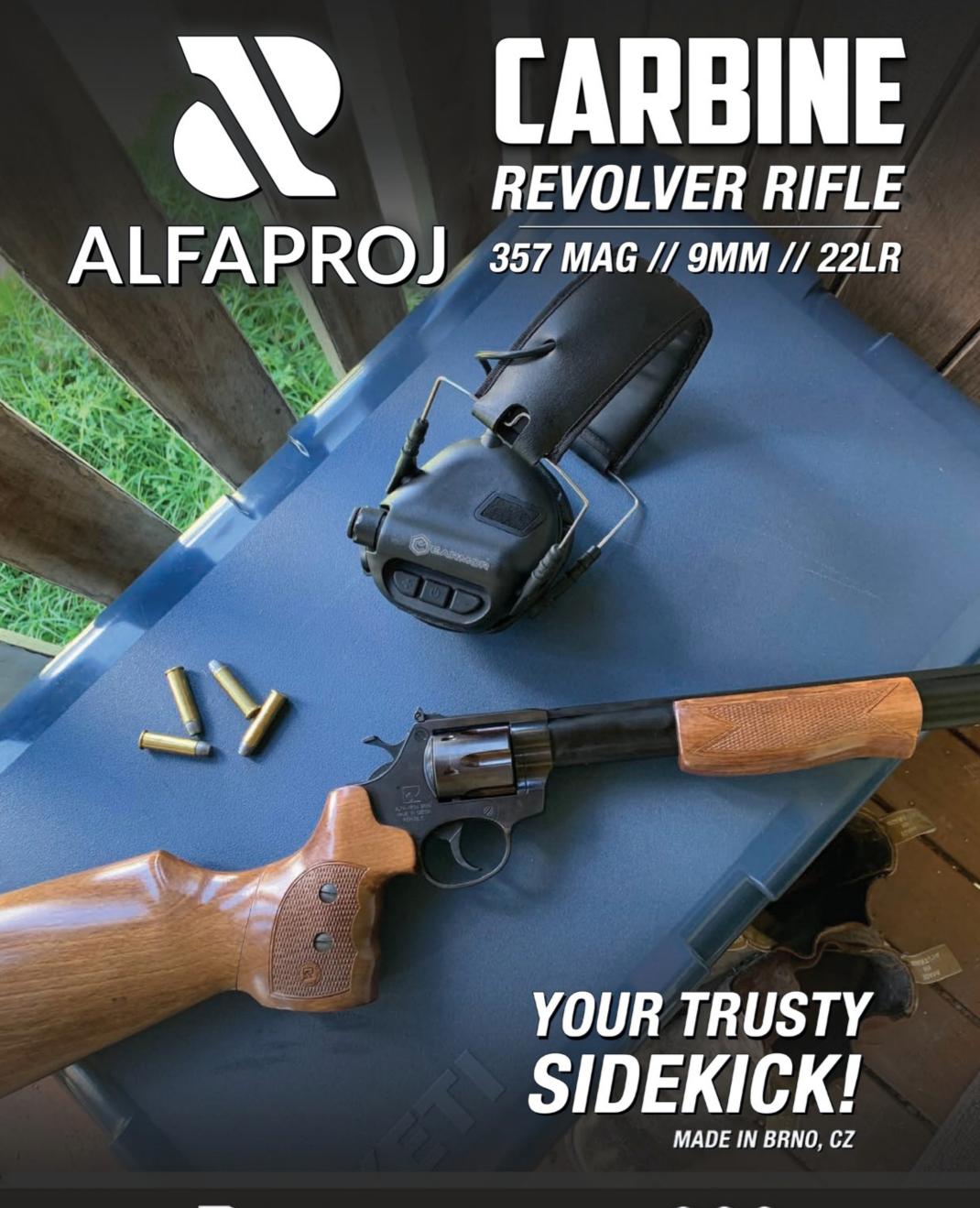


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Knockdown power is overrated

No hunting bullet can literally lift an animal off its feet.

HOW often do we read, "the bullet knocked the great stag off its feet," or "the bullet slammed the boar over on his side," or "the bullet punched the billy off the ledge he was standing on and launched him into space"? It is all a lot of wishful thinking, I'm afraid; it just doesn't happen.

This statement will probably

solicit screams of rage from true believers who dote on energy figures as their yardstick for killing power. They will be asking: What of the more than two tonnes of energy unleashed by some magnum cartridge or another?

Over the years, countless numbers of big game have been killed with a wide assortment of calibres encompassing everything from the fast .22s to some of the most powerful magnums. Some were shooting light bullets at ultra-high velocity, and others using heavy large-bore bullets at medium

velocity. Animals are hit anywhere from head to hindquarters, and hunters have witnessed some mighty strange things happen after they were hit.

But the more game one sees shot with various cartridges, the more apparent it becomes that there is no such thing as knockdown power caused by bullet energy alone.

Every gun writer uses kinetic energy figures as a way to compare one cartridge with another, but bear in mind that they are only theoretical paper figures which do not take into account the design of the bullet or how well or how poorly it may have been placed.

A full metal case (solid) bullet of a given weight leaving the muzzle at a given velocity has just as much energy, on paper, as a soft point or a controlled-expansion design. But when you shoot an animal through the lungs with the solid bullet it may not show any sign of being hit, and often will run a considerable distance before it drops dead.

With similar placement, a soft-pointed expanding bullet usually results in an instant on-the-spot kill.



ON THIS SPREAD

This buffalo was hit in the This buttato was inclined head. The bullet hit the brain and the bull dropped straight away, but there was no knockdown effect.

This fallow deer was shot through heart and lungs and appeared to be knocked flat, but this resulted from destruction of vital organs rather than any knockdown effect by the bullet.

The reliably effective killing power of any bullet is dependent on both kinetic energy and momentum."

Many shooters fantasise about knockdown power. More wild tales have been concocted about it than any other shooting subject. Alas, the truth is there is no such effect, since no sporting firearm delivers enough power to knock a big game animal flat, or stop a dangerous beast in full charge by the sheer force of the bullet's impact alone.

Belief in knockdown power is a trap that's easy enough for the inexperienced hunter to fall into because it sometimes happens that, when game is shot, it will make a sudden dash or otherwise react as if it was moved by the force of the bullet. And if the bullet had a residual energy of 2000ft-lb or more, one might naturally expect the bullet to exert some

force on the animal, even to the extent of knocking it flat.

In theory, about 4400ft-lb (6000J) of muzzle energy should be capable of lifting two tonnes 0.305 metres (one foot). To test the practical efficiency of this, place a block of 12x12 hardwood on a flat surface. Then shoot at it with an expanding bullet which has two tonnes of kinetic energy and expands enough to be stopped before exiting the timber, thus deliver all of its energy. What happens? Very little. It is unlikely that the block will be knocked over; probably may not even move even if hit dead centre. So I ask you: Is there any chance that such a hit would up-end a deer weighing 181 kilos (400lb) by the sheer force of the bullet?

As an impressionable youth, I shot a goat that appeared to have been literally punched off its feet and thrown off the ledge it was standing on. It was a spectacular sight and I was convinced that the 130gn bullet from my .270 Winchester had hit with enough power to knock that goat off its feet and start him rolling down the slope. To me, it seemed a spectacular display of knockdown power and I instantly became a true believer in it.

In fact, the bullet hit that goat at a sharp angle downwards behind the shoulder, passed through the lungs and ranged forward to leave a large exit hole. While a lung shot doesn't always result in instant death, it was the

smashing of the shoulder bone, with the attendant impact to the base of neck and spine, that caused a muscular spasm that I mistook for knockdown power.

Different species and sizes of animals react differently when struck by a bullet or, to be more accurate, to the effect of shock. Some smaller deer are highly susceptible to it, but larger deer such as sambar, wapiti and moose are not. In the latter case, a hit which leads to the assumption of bullet knockdown often results from a violent muscular reaction, particularly if a nerve centre is hit.

I've read any number of gun-nut authored articles filled with gobbledegook about "shock waves" and "nerve

paralysis" and "hydraulic shock". So far as can be proved, however, the physical destruction of which a bullet is capable is purely a function of energy over time.

Velocity plays no part in the formula other than its contribution to energy, and the reliably effective killing power of any bullet is dependent on both kinetic energy and momentum. Few shooters pay attention to the momentum possessed by heavy bullets when driven above moderate velocities and the resultant force and penetration achieved.

Given that any bullet's effective killing power is dependent on both kinetic energy and momentum, a bad bargain will inevitably result when either is purchased at the expense of the other.

The combined experiences of many veteran hunters indicates that under the seldom ideal conditions normally encountered in game fields, the efficient killing of deer-size animals requires a striking energy of at least 1000ft-lb; elk require at least 1500ft-lb and moose 2000ft-lb. These are minimum energy figures and I believe they are valid. But wait — energy is only half the story, as I previously stated.

Obviously, what we need is some measure of a moving object's ability to start a stationary object moving, or to stop another moving object. Any elementary physics book can supply the answer in a simple formula.

Put simply, when a standing animal is shot with a bullet, that bullet doesn't always completely penetrate the animal but expends its energy trying to get through. The speed of the animal imparted by the impact of the bullet will equal the weight of the bullet in pounds times its speed in feet per seconds divided by the weight of the animal in pounds. Most likely this



ON THIS PAGE

A mature red stag requires at least 1500ft-lb of energy and a well-placed top-performing bullet to score a clean kill.

The average wild pig is no giant, weighing an average 35-45kg. These three were not knocked off their feet when hit with 12-gauge rifled slugs.



formula would be considered inaccurate by a scientist or a ballistician, but it is simple and close enough for our purpose.

It is worth noting that the heavier the animal, the less it will be moved, and the faster the bullet, or the heavier it is, the more the animal will be moved when hit.

This formula also explains why muzzle energy is not a true measure of a bullet's ability to move things. In the formula for computing energy, the bullet's velocity is squared then multiplied by its weight. In our formula the velocity is multiplied directly by the weight. For example, if the speed of the bullet is doubled, the energy is multiplied by four, though its ability to stop is only doubled. And if the velocity is tripled, the energy is multiplied by nine.

Hence it is easy to see that the energy of the bullet does not give a true indication of its ability to move objects since, in the energy formula, undue emphasis is being placed upon the velocity.

Most reliable observers of killing power have concluded that kinetic energy determines a bullet's total destructive ability — in volume of tissue destroyed — while momentum is one of the chief determinants of penetration. Therefore, the bullet's momentum determines the depth of the wound, while its kinetic energy determines the extent (or volume) of the wound.

A bullet lacking only in energy may penetrate right through an animal, with little tissue destruction, thus allowing the stricken animal either to run a long way or survive the wound and escape.

The high-energy, lowmomentum bullet, on the other hand, will destroy a lot of tissue but only to a comparatively shallow depth. Such a bullet usually kills spectacularly when placed in the lungs, but often fails miserably when heavy bones or thick shoulder, neck or rump muscles are encountered on the way in.

Newton's Third Law of Motion states, "for every action there is an opposite and equal reaction". Thus a rifle is given as much momentum backwards as the bullet is forward. This is an invariable law, as inescapable as the fact that everything has mass.

All things being equal, the gun moves the hunter exactly as much as the bullet moves an animal weighing as much as the hunter.

Therefore, if you wish to knock a 90kg animal end over end with sheer knockdown power, you must expect the same fate yourself from the recoil of the rifle.

The kind of knockdown power that knocks a buffalo off its feet, and stops a charging lion dead in its tracks, simply doesn't exist.

There's nothing like it in any sporting rifle, nor can there be so long as guns are fired from the shoulder.



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Five year trophy

Michael Abdennour learns to stop chasing and wait for the bucks. He gets his long-sought trophy as a reward.

or five years I've been trying to get a decent buck to shoulder mount. Endless kilometres of walking. Seeing deer all over the place. Watching my mates shoot bucks. Social media showing off amazing bucks all over the world. To add to that misery, I messed up two opportunities that should have been easy, to say the least.





FALLOW HUNTING

I CAN say a lot of the lessons I've learned haven't been from successes, but rather from abysmal failures. I started to feel like a pathetic loser, but 2022 just had to be my year.

I had shot a young buck on my first ever trip out, but he was young and not well developed. Don't get me wrong, in my opinion all these creatures are amazing and I appreciate them all. However, if I was going to spend \$1000 on a mount it had to be at least a mature buck.

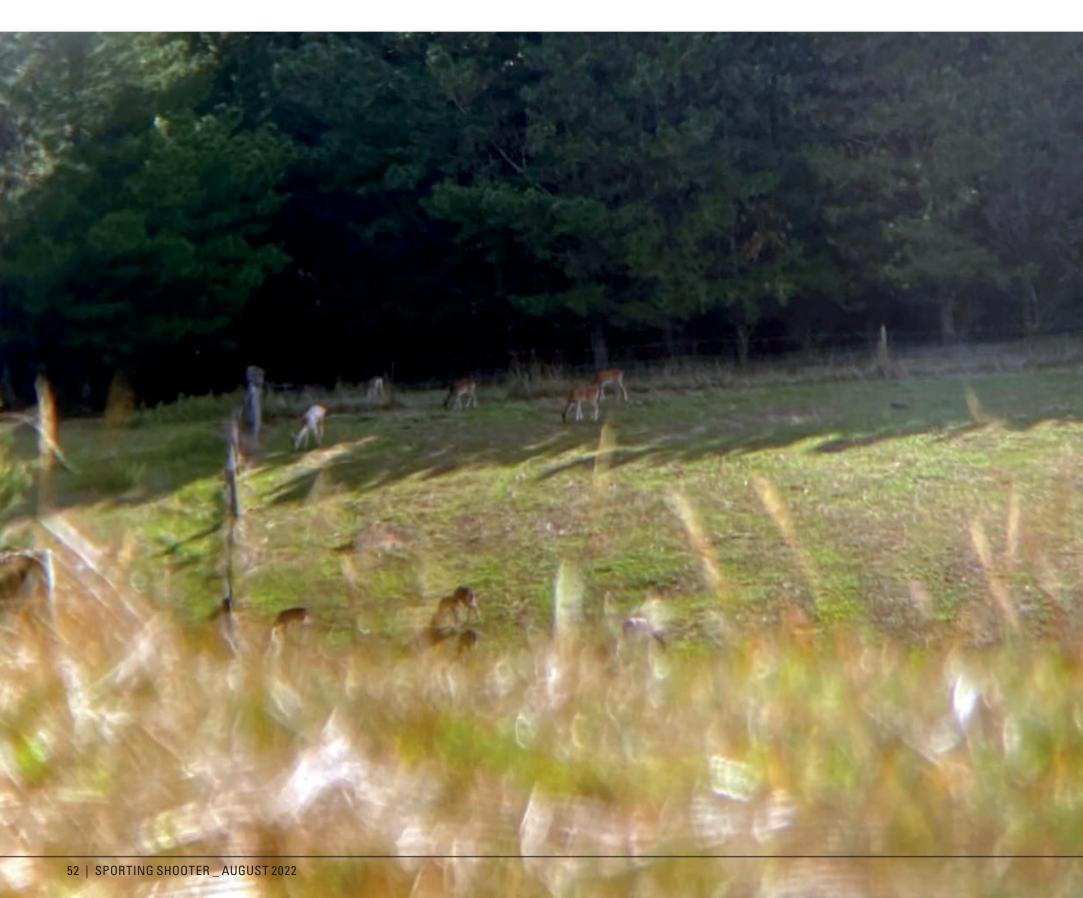
I am no trophy hunter and don't know the first thing about it but I know something for sure: after seeing various mounted specimens, the antlers are not always the most decorative part of an animal. The body shape, the colours, thickness and character come into it as well. But most of all, it's the story — the experience of the hunt is where the true trophy lies.

On this particular trip we are doing our usual thing — a group of five guys head away from home life, work, family, phones and office to get in amongst it. Our primary focus is mainly meat harvest. But it is wet, foggy, low visibility, no beds, no toilets, no showers, putting up with wet and cold clothing for four nights. None of this matters as I am on a mission.

The rut's croaking has only just

started. It's patchy, coming from various areas and always out of the territory where I can hunt. We have already bagged a few young meat specimens, and sampled some. I love the meat of fallow, it's so good.

My hunting buddy and I catch a glimpse of a distant buck passing through a particular passage of bush. People had said in the past that a rutting buck doesn't travel far from his stomping ground, that he stays in his territory most of the time. I had never really believed it, stubborn as I am. I usually insist on wandering aimlessly, hoping that by covering a heck of a lot of ground I eventually will get an opportunity to shoot an unlucky



bugger that doesn't see me. But this time, I finally take the advice.

A mate and I stake out the area of the buck sighting. I get in and set up early. By early I mean by 2.30pm, not 4.30pm as I would usually do. I pick a spot where I can see a wide area from 300m away. I will not shoot or spook the does or young animals. This time, I am serious about a buck and I ain't shooting a young meat animal till I get him.

Two does appear and begin feeding towards me. Not long after, a small group including a young buck follows them. The young buck is mocking his predecessors, pretending to mate, pretending to

chase females, digging up soil, but they never take him too seriously. He is a lively and good-looking young buck, but I leave him alone, quite content to watch.

A good two hours pass and I haven't moved a muscle.

Just as I am starting to lose hope and think maybe I should get up and walk around, my mate — the voice of calm — recommends we sit it out a bit longer. Just then, a mighty croak comes out of the bush to my right, no more than 20m from us. The hairs stand up on my neck. My heart races. Adrenaline pumps through my veins. Every sense is going wild. I dare not move a muscle. Eyes scanning as hard as

I can to get a glimpse of the buck I've been waiting so long for.

For 15 minutes nothing happens. My hope diminishes. Have I blown my chance? Should I have charged in after him? But then the buck appears, trotting to meet the young buck, bullying him and showing him who's boss. Croaking like crazy! He's now 300m away. It's a gettable shot, but he is angry, constantly on the move, rounding up the young girls. This guy means business. He's the real deal. He's powerful and heavy set, with a big, mature body and half decent antlers. I am content to claim him.

I'd really love him to come closer. Fifty metres more and my

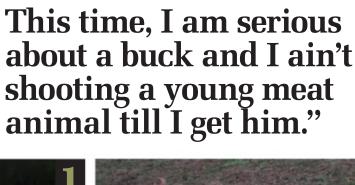
1 Deer teeu along the edge of the Deer feed along tree line, oblivious to the presence of hunters.

20ne for the wall and one for the plate ... in that order.

3 Michael's trophy buck where it fell.

4 Heading into the fog in search of success.













ON THIS PAGE

5 If you're going to sit and wait for them, you might as well be comfortable and steady!

6 Processing the fresh, juicy venison.

Deer on a stick: how to eat well when you're out bush.

confidence will grow. Sure enough, he heads towards my location, croaking, and all of a sudden he stops, right in my kill zone. What luck!

I lean into my Hyper Pod II, perfectly still. Time seems to stop. I line him up and raise my aim six inches higher than my target spot because I remember this damn 180gn .30-06 drops a hell of a lot over 250m. I touch the trigger and the violent recoil of the .30-06 disorientates me. I lose sight of the buck and have no bloody idea what's happened after the shot.

As everything settles he is nowhere to be seen. I begin to sweat, and curse myself in disbelief. I can't have missed, no bloody way. My heart sinks. And then he appears, running towards me, trying to get back to where he first croaked from. But he is hit. He tumbles over, then as he gets up I put another into him to secure the kill.

Now, at this point my best guess is he is finished. I am no pro but heed my words — do not take your eyes off a downed animal for a second. I have had animals down

and as I have looked away the buggers have gotten up and run off.

So I sit and wait, watching the buck intensely through my scope, ready to send another if necessary. Ten minutes pass. Now I am satisfied he's finished but to my disbelief the mighty beast stands again. A final shot finishes him.

Funnily enough, we're lucky that a young doe sticks around. She takes a bullet from my buddy's .243. Her meat is an additional yield for our efforts.

On closer inspection of the buck, it's obvious the bullet did drop a

heck of a long way, so the holdover was necessary but another two inches higher would've led to a better shot placement and finished him more effectively. Lesson learned.

The rest of the crew joins us to view the buck. We're all so happy. I have broken my voodoo. After some pictures, I thank the animal that I am now in love with, cape him and prep him because he is going up on my wall to be admired for the rest of my life.

The experience is the true trophy. I loved every minute of it.







CHANGING LANDSCAPES

Between droughts, fires and floods, our hunting grounds are constantly changing. Damo Hart has been watching it.

After the fires



here I live in the south-east of Australia can certainly testify to the accuracy of Dorothea Mackellar's words in her poem, "My Country", where she spoke of this land "of droughts, and flooding rains".







THE terrible bushfires which started towards the end of 2019 after a period of extreme dryness ravaged a vast area of the country, including my local hunting grounds, and the very wet years that followed have delivered a profound change in the environment and introduced new opportunities and new challenges.

Large areas of this land formerly consisted of open, dry sclerophyll eucalypt woodland, and some of it had a thick understorey of scrub of various species. Some areas were made up of largely unbroken patches of kunzea and melaleuca, and you could only wind your way along the few animal tracks to get through it. The fires changed all of that, dramatically.

At first it was largely scorched earth. When the first floods arrived after the fires, they stripped away the fines from within this bare land, leaving exposed rocks and pebbles as a background for the ghostly scars of the trees and logs that once stood or lay there.

But once the rain remembered how to fall regularly things quickly changed. The epicormic shoots on the eucalypts were first, but then seedlings began to sprout from the bare earth and the transformation of the land started in earnest.

I didn't do much hunting for most of 2020, partly because my son (and main hunting buddy) was away 2020 became a wet year. Nature started to repair itself and the animals

returned."

overseas, and partly because there was hardly anything around. I don't know where the little mobs of fallow I'd been cultivating dispersed to, and I have no idea where the pigs and goats and foxes found shelter amid such devastation. To be honest, I thought they'd been through enough so I left the survivors in peace. There were some small pockets of unburned bush in the desolation, but they hardly seemed like enough to handle all the missing animals.

Ultimately, 2020 became a wet year. Nature started to repair itself and the animals returned.

I returned to one of my old hunting grounds in October of 2021. It was first thing in the morning, and I had just parked the ute and started walking in to do a round of the block. I had not even gone 100 metres when a pair of mid-sized pigs ran across right in front of me



ON THIS SPREAD

My cousin and occasional hunting buddy Andy with a nice boar he picked up just after we started hunting again. Note the multitude of dead stems behind him, which make a fantastic habitat for spiders to tether their webs between.

The understorey completely obliterated, I wondered where the animals found shelter for the months after the fires.

A nice boar on a trail camera heading back to a neighbouring property with an unburned patch of scrub. Despite my attempts, he and I failed to meet up until my son came home from overseas.

Fire-hardened dead stalks can be like Burmese tiger traps for unwary hunters, slipping effortlessly through the soles of your hunting boots.







from the river towards some trees on my left, towards the inner part of the block.

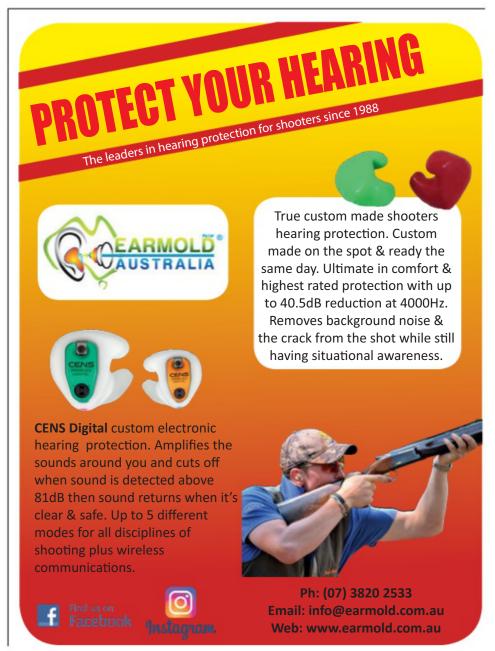
This property was essentially a bush block, with two clearings in among huge areas of tall melaleuca, waist deep kunzea and patches of gum trees, and so you can imagine my surprise when I rounded the end of that tree line to see where they had gone and not only could I see the pigs slowly poking their way across the paddock, but I could see right across it maybe 500 metres or so!

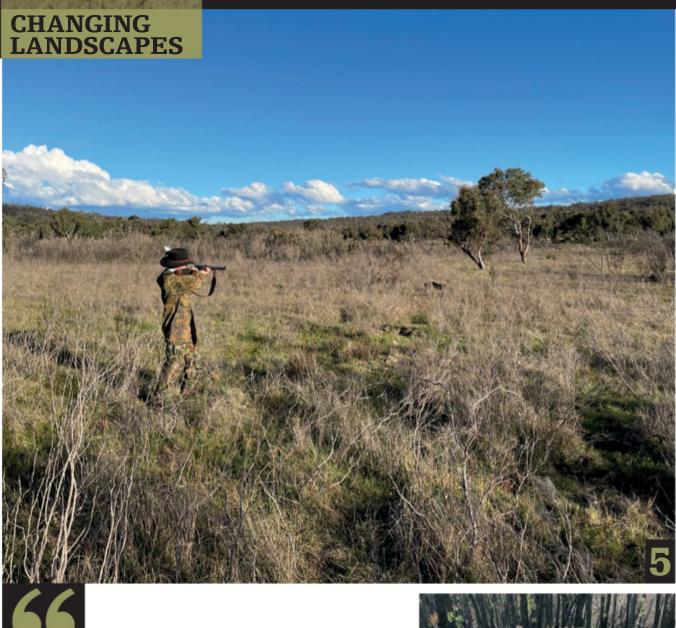
I put in a hurried stalk and then decked one of the pigs with my .22-250. The other one ran a short distance away then stopped. I could clearly see it through some burned melaleuca stalks. I tried to pick a gap to shoot through

and fired but must have tagged something unseen between us, which resulted in a complete miss. The pig ran a short distance behind another patch of stalks and I took another shot, but again I failed to pick a gap that my highly frangible projectiles could make it through unharmed, and so the pig lived to die another day.

That was my first lesson after the fires — you can see a heck of a lot further through a burned landscape than you can shoot through.

The pigs had clearly survived the fires. There were tracks everywhere. Over a few more visits to that block I realised they were thriving. I picked up several other animals at different ranges, each with different rifles as I kept switching in a vain







You can see a heck of a lot further through a burned landscape than you can shoot."

ON THIS PAGE

5Corben takes aim at a pig half obscured by dead bushes.

6 Damp, bare earth is great for spotting recent animal activity.

The remains of a huge log is not much more than a ghostly shape on the scorched earth a few months after the fires.

effort to counteract the newfound bush challenges.

This was through the summer and into the autumn, times when I normally didn't get many pigs, but the wetter-than-normal season and the rapidly recovering environment seemed to keep up a steady supply. I set up game cameras to see what was around and saw several different groups of pigs, including a family group that used to like wallowing in a small puddle, despite there being a whole dam only 50 metres away.

After searching it over and over, I eventually figured out that the pig family wasn't living on the block, but rather they were coming in to feed and living in another property in a large, unburnt patch of kunzea which I didn't have access to. I guess that was where they had managed to lie low and survive the fires before they started to breed up



and needed to expand their range.

The little mob of deer had disappeared from my other favourite block, but as the rut came around in 2021 a few bucks were still calling their throaty calls in the early mornings. I managed to bag a nice one. The pigs continued to thrive and as 2021 ended up even wetter than 2020, the regrowth of the bush really started to take off and pigs were popping up like mushrooms all over the place.

Wattle created an entirely new ecosystem. It makes for excellent pig cover and I assume it is contributing to their resurgence. The fires and smoke seemed to stimulate wattles more than most things, and they were one of the first plants to bounce back. Even in places that didn't get burnt, their seedlings went berserk and formed dense thickets that are almost impossible for a human to walk through — and believe me, I've tried!

They are ideal for animals, though, with very dense interlocking foliage but reasonably open stems which are just at the right height for pigs and wombats. It's hard to imagine a more perfect cover for them.

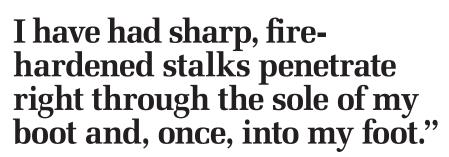
The recovery time for some of the burned areas varied, and some areas of bare earth remained even until the end of 2021. Kept damp by the ongoing rain, these make excellent locations to look for animal tracks and, together with strategically positioned game cameras, I have found them to be a great way to monitor recent activity.

I haven't seen a single venomous snake in the many, many kilometres I have trudged through these landscapes, but there is another ever-present danger that you must be aware of: the fire-hardened stems of old bushes hidden beneath the now-flourishing grass. Native people have long understood that hardening their wooden spears and arrows over a fire lends them great



CHANGING LANDSCAPES





structural integrity and nature seemingly knows this, too.

Not only does it pose a serious trip and noise hazard, but I have had sharp stalks penetrate right through the sole of my boot and, once, into my foot. There are some places I hunt which had been so thick with kunzea before the fires that it is now difficult to take a step without coming into contact with these dangerous leftovers.

While they were especially strong and sharp in the first 18 months after the fires, thanks to the continuing wet weather they are finally starting to break down and become less of a problem — but very slowly.

Grass spiders are also having a big resurgence, including the orb weavers and spiny spiders. I swear I have never seen so many webs in my life. It is not uncommon when heading out for an early-morning stalk during the summer to be greeted with a shimmering paddock chock-a-block full of dew-covered webs — but at least when there is dew you can see them.

When I've walked a couple of kilometres around my hunting blocks without the benefit of dew to spot the webs, I've returned to the car looking like the villain from a Spiderman movie, with grass spiders tickling my skin at inopportune times as I drove home!

It's been a fascinating experience to watch the recovery of the land after the devastation brought about by the fires. As I went for a stalk this afternoon the abundance of foot-high melaleucas in what had been a fairly open area for the past two years signalled that it won't be long before many of the new clearings close up on me completely. The young eucalypts growing prolifically elsewhere on that block are filling in other voids, and between those two and the already well-established wattle thickets, it won't be long before





I won't be able to see far enough to stalk in there with a rifle at all.

The saying "make hay while the sun shines" springs to mind, and so I spend as much time hunting these blocks as I can get away with while the going is good. It has been a very productive time for a stalker like me and I plan to enjoy it while it lasts.

ON THIS PAGE

Two sows and a group of piglets I collected with my trusty under/over Huglu 12-gauge while exploring a narrow gully bordered on each side with extremely thick regrowth.

The boar from the game camera photo that my son Corben shot within a week of returning from overseas — quite a decent tusker for these parts.

10 The edge of one of the wattle thickets that have sprung up everywhere with animal tracks disappearing underneath.















Samara takes a classic .303-25 on her first pig hunt. Both excelled. John Dol tells the story

Young gun and old gold gold



TOP: John created a good looking classic, including adding a No 4 style cheek riser. ABOVE: The Addley Precision mount for the old Lee Enfield action. RIGHT: Samara with her prize.

y 15-year-old daughter Samara has shot a good many rabbits and has been on many pig hunts with me, but this trip was her first pursuit of pigs. And the rifle she would

use was a very different animal to those seen around contemporary pig hunting circles — a .303-25.

THE old .303-25 cartridge was the mainstay of the Australian hunting scene in the 50s and 60s but is now considered out of date, grandpa's gun, inadequate. Hmm, inadequate? How can an 87-90gn soft-point projectile buzzing along at just on 3000fps be inadequate? And what does 'out of date' mean?

This was not something I could possibly accept, so I acquired a 1901 Lee Enfield Mk 1*, built by BSA, for \$350. It wasn't the prettiest rifle but was a solid foundation to build on. It had been re-barrelled with a 24" barrel from a 25-20 Winchester and appeared to have some kind of microgroove rifling in it.

After some barrel floating and action bedding on the stock, I

lapped the muzzle crown, as it was looking a bit sharp and ragged right at the hole. I then outfitted it with a nice, new 4-12x40 Bushnell Engage scope on an Addley Precision mount. I added a cheek riser similar to the original Lee Enfield No 4 T sniper rifles to bring the eye up to the level of the scope, which Samara decided she didn't want for our hunt, so I took it off before we left.

Factory .303-25 loads haven't been made for many years so after consulting Nick Harvey's excellent handloading manual I worked up some loads in Bertram cases. I found the 87gn Bertram soft-point projectiles were as accurate as anything else on the market that I tried and with a healthy dose of



ADI 2206H it printed just over 1" consistently at the 100m mark at the range. Indeed, we clocked them at just on 3000fps.

At the property, our first tour of the dams (tanks) showed nothing except for a few wallows, some fresh, some not so. It was extremely humid and at 30-odd degrees it was starting to tell on us Victorians who were used to 10-15 degree days. With the grass as high as it was our hopes of seeing pigs early was fading.

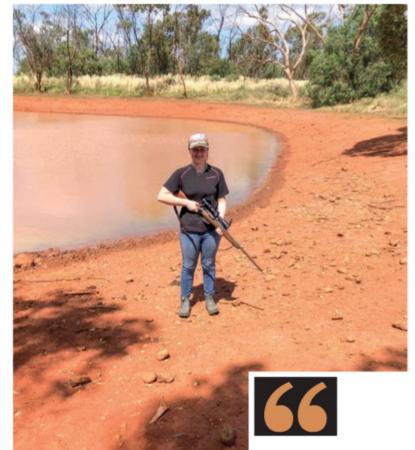
When we got to the last tank we were in for a surprise. The three of us walked to the top of the dam wall and, almost as if rehearsed, right across the other side a young boar turned the corner at the inlet and came casually strolling in toward the water.

Samara assumed her practiced position for longer shots, sitting with her knee up, her elbow on her knee and the forend of the rifle stock in the palm of her hand. I looked back at the pig just in time to hear the crack of the .303/25 and see the boar's legs collapse from under it from the head shot.

I couldn't believe what I just witnessed: she was so quick to get in position, get on target and get an accurate shot away. Definitely a chip off the old block there! We later estimated the distance to be 115yd.

That was to be the only pig for the day for Samara and we didn't see another until two days later. At the same tank, we spied a







Samara was so quick to get in position, get on target and get an accurate shot away."

smaller boar in a wallow. This one was considerably closer at around 20yd so Samara raised the rifle to her shoulder and shot it free hand. It was a neck shot from above. The damage inflicted by the 87gn soft point was too severe for a presentable pic — suffice to say it was dramatic!

Being November, the end-of-year exam time was looming for the kids and Samara was no exception, so back at the shed she had her school books out and put in a couple of hours' study after the morning's hunt. She didn't want to miss her grades while away hunting.

She commented after dinner and before our spotlighting adventure that she preferred to have the cheek riser on the butt of the rifle after all and asked if we could put it back on for her when we got back home.

We tried our luck with spotlighting later that night but to no avail. It was curious that all the resident goats had disappeared all of a sudden and the humid air had taken on a much wetter feel to it. Just as we arrived back at camp the rain started; thank goodness we were in the shed.

It rained heavily off and on all night. First thing the next morning we could see how much water had already fallen, so Doug and I decided to pull the plug and get out of Dodge. We packed the car and said a hasty goodbye to our friend at the property, missing out on our customary cuppa before departing.

Even as quick as we were to get away, I felt it was almost too late. During the next two hours of dirt road driving, we were in 4WD all the way from the homestead to the bitumen, which was about 150km, punching through mud that was inches deep.

At times we moved at walking pace trying to keep the car on the road. Wading through water hundreds of metres long, as deep as the bottom of the bull bar, with rain hammering down the whole time, we had our hearts in our mouths. We learned later that a lot more rain had fallen that day and into the night.

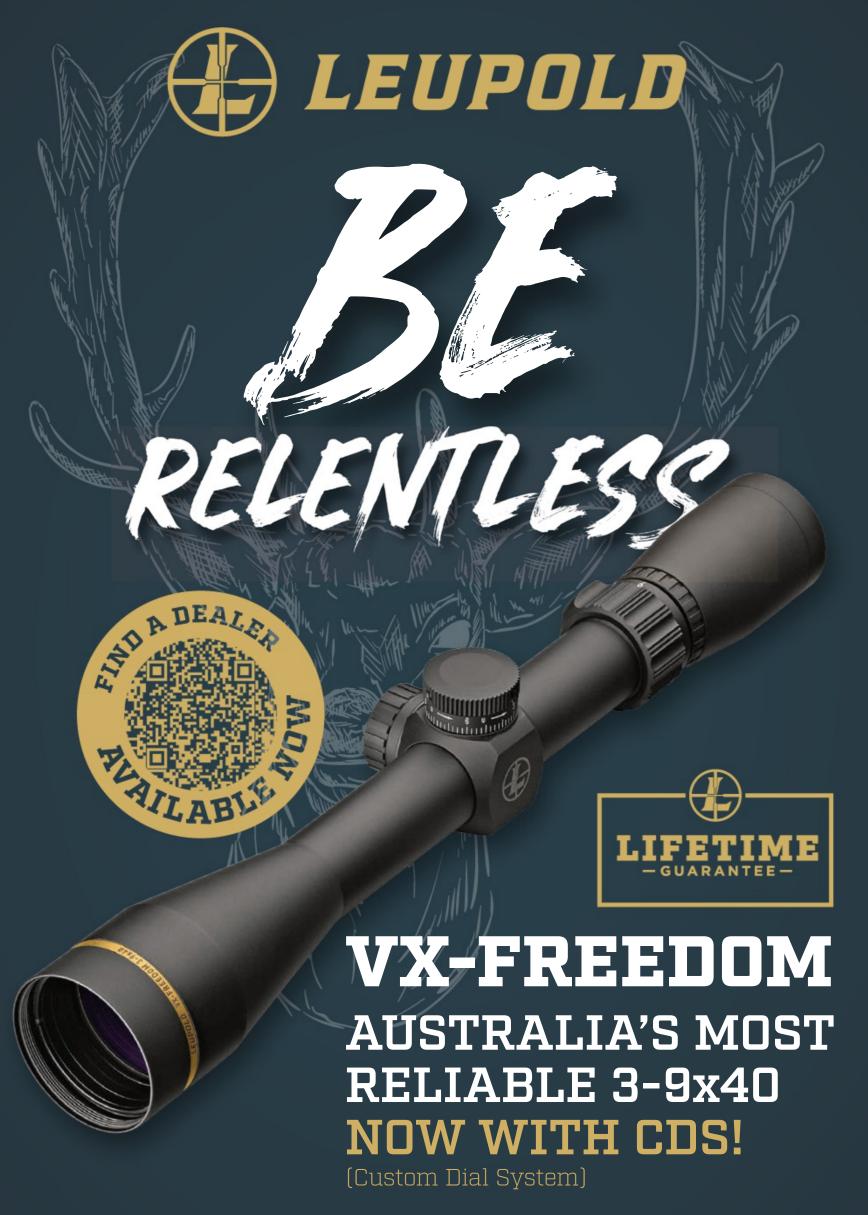
We were very glad to hit the bitumen and point the Landcruiser south towards home, a very memorable trip for a young lady and indeed for Doug and I, and a great adventure for all of us.

ON THIS PAGE

The .303-25 cartridge next to a .223 for scale. It's firing an 87gn pill at 3000fps!

2 Samara with her accurate old BSA on one of the dams.

This custom Victorian-era rifle is shooting brilliantly as a sporting .303-25.





SHOOTER'S SHOWCASE

SIG Sauer Kilo5K rangefinder

The new Kilo5K 7x25mm laser rangefinding monocular by SIG Sauer has a maximum reflective range of a staggering 5000 yards and includes the Applied Ballistics Ultralight app along with environmental sensors that help it calculate real-time ballistics adjustments. It supports BDX External (BDX-X) for connecting to Kestrel, Garmin and other devices. The second-generation LightWave DSP engine features new target modes: Extended Range (XR) and Fog Mode along with first, best and last targets.

The viewfinder has a segmented OLED display which provides range

to target, elevation holdover and wind holds.

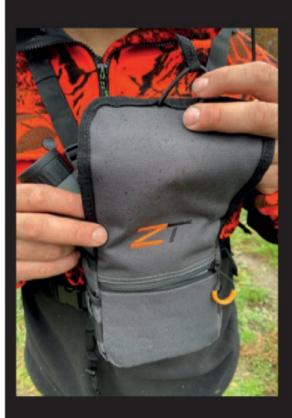
The Kilo connects with the BaseMap app to provide remote waypoints on ranged targets and can be fully configured with the SIG Sauer BDX app.

All Kilo K-series rangefinders use Bluetooth 5.x for multipoint Bluetooth connections and improved connectivity to BDX-enabled riflescopes and sights. The Kilo5K comes complete with a black/grey carry pouch and lanyard.

Ask to see them at your local gun shop or visit www.osaaustralia.com.au.



ZeroTech binocular harness



When you purchase a pair of ZeroTech binoculars you also receive a protective, flip-top carry bag that offers protection for your binos when in storage or that can be worn over the shoulder when out for a walk. However, most hunters these days use a bino harness allowing quick access, protection and hands-free carry. To complement its new range of binoculars, ZeroTech now offers a

protective bino carry bag and harness as an all-in one unit.

Lightweight and compact, this harness features the traditional crossover bino harness with four-point connection, and also comes with a separate carry strap that can be attached if and when you don't want to use the harness. Simply remove the harness via the clasps and attach the shoulder strap or vice versa.

While quite compact in size compared to some, the ZeroTech bino harness still offers protective padding for comfort and protection, while also featuring a generous front zip-up pocket, two side pockets for perhaps a powder puffer, game caller or small torch and even a large mesh pocket on the back for other essentials like a licence, wallet or mobile phone.

Rugged and strong, the harness also offers magnet closure and fail-safe clasp, while the binoculars are attached by two quick-release points that secure them to the case. Well-made and well finished in charcoal/black with the ZT logo, the ZeroTech bino harness/carry bag retails for around \$89.95.

Ask to see the range of ZeroTech optics and accessories at your gun shop or visit www.zerotech.com.au.

Blaser B2 riflescopes

As most will know, I use a German-made Blaser R8 straight-pull bolt-action rifle when big game hunting and have done so for many years. The big news is Blaser recently released a range of rifle scopes to complement its firearms, referred to as the Blaser B2 series. However, you don't have to own a Blaser rifle to justify one of these well-made scopes. They have a 30mm tube and are an excellent choice on any firearm.

Blaser B2 riflescopes are available in 1-6x24, 2-12x50 and 2.5-15x56. Featuring 6x zoom, all offer an illuminated 4A reticle in the second focal plane and are ideal for day or night shooting. Made in Germany, they are nitrogen purged and waterproof to four metres. They are of compact design, so they are purposely made to allow clip-on devices like night-vision gear to be adapted with ease.

Other features include Smart Lens Protection (SLP) hydrophobic lens coatings, 90mm eye relief, continuous variable adjustment of illumination intensity and lots more.

Ask to see the new Blaser range of rifle scopes at your local gun shop. Trade enquiries, contact Australian agent OSA Australia or visit www.osaaustralia.com.au.





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ZeroTech binoculars

TSA Outdoors has some 50 years' experience in the optics industry and in recent years developed a range of riflescopes to suit the requirements of Australian hunters and target shooters. TSA wanted something that would withstand our Aussie conditions. In addition, it wanted to design its own range of riflescope reticles with unique features to benefit the Aussie market.

The result is ZeroTech and its Trace, Thrive and Vengeance series of riflescopes that cover all disciplines including hunting, target shooting and long-range shooting, in a large variety of magnifications, reticles and configurations. Add to this illuminated and non-illuminated scopes and the option of first or second focal plane models.

ZeroTech has now released a new range of binoculars to complement its fine range of riflescopes. An addition to the Thrive series, these binoculars are available in the choice of 8x32, 10x32, 8x42 or 10x42mm and offer excellent clarity. Of roof prism design, they also feature fully multi-coated lenses, diopter adjustment, centre focus wheel and an ergonomic rubber coating for non-slip grip and protection from knocks and bumps.

Thrive binoculars feature a modern look and feel and come complete with ocular and objective protective caps, a flip-top carry bag, shoulder strap and unconditional lifetime warranty. Another interesting point that really impressed me with regards to all ZeroTech products is their exceptional packaging and presentation, which also includes setup instructions and even a ΩR code scan for an online instructional manual.

The Thrive range of binoculars retail from \$240 to \$300 and represent excellent value for money. Ask for them at your local gun shop or visit www.zerotech.com.au.





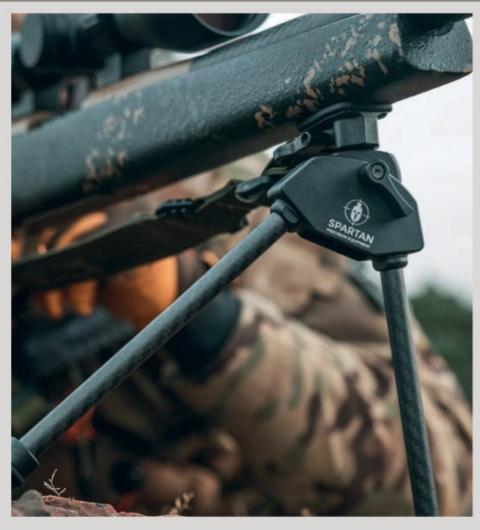
Ridgeline Tusk fleece top

The Tusk fleece top is not only warm and comfortable to wear but is water and wind resistant thanks to a membrane that's been added for use in poor weather conditions. Its black and blaze-orange finish makes it ideal for use when out hunting in areas where you want to be seen by other hunters but not the quarry. I'd expect it would be equally at home for farmers, tradies and other workers who require high-visibility clothing when working on-site.

Offering a classic fit, a half-zip neck opening and fitted hood for wet or windy conditions, this top is comfortable and allows plenty of movement. It is made from heavy-duty 340gsm Southern Star fleece and features a separate flap and zippered chest pockets for essentials. Available in small to 5XL, the Ridgeline Tusk fleece top retails for around \$140 and is available though your local gun shop.

For further details or to see the full range visit www.ridgelineclothing.com.au.





Spartan Precision Equipment

This British company has rapidly gained momentum with its excellent range of bipods, tripods and accessories. Its patented range of magnetic attachment systems is strong, lightweight and reliable, allowing you to attach these bipods to a rifle in seconds. Here's a look at some of its range.

Javelin Lite

With interchangeable leg options, the Javelin Lite bipod is available in three lengths to accommodate shooters wanting a lightweight modular bipod that will serve multiple disciplines, from shooting on the range to hunting in the most demanding environments. By using high-grade carbon-fibre, the Javelin Lite weighs just 130 grams and does not compromise the balance of a rifle, making it perfect for hunters on the move, especially as it can be attached and detached in an instant using the Spartan magnetic attachment system.

- Locking cant facility for uneven terrain
- Track targets with the traversing function or use in locked target mode

- Interchangeable fixed-height legs
- Quick and easy to swap to other rifles using the Spartan magnetic attachment system
- Secure sling attachment
- Low profile adapter makes carrying a slung rifle comfortable
- Range of different accessory legs available to accommodate different shooting positions and terrains
- Supplied with classic rifle adapter kit to attach bipod
- Compatible with a full range of 12mm Spartan adapters.

Javelin Pro Hunt

Carried off the rifle and attached in seconds, the Javelin Pro Hunt bipod is designed for hunters who need to cover lots of ground but be ready in an instant. Attached to your rifle using the Spartan magnetic attachment system, the Pro Hunt has lockable, extendable legs that are easy and quick to operate with a single hand. Hunters challenged by uneven terrain will appreciate the single-button Leg Lock-Out

feature to open and close legs and ensure they stay fixed in the shooting position.

- Track targets with the traversing function or use in locked target mode
- Cant facility for uneven surfaces
- 7075 hard anodised aluminium and high-quality carbon-fibre for light weight and strength
- Modular design accepts a range of different legs for different shooting positions and terrains
- External friction lock design helps keep the locking mechanism out of the dirt and allows bipod legs to be adjusted quickly and easily
- Low profile adapter makes carrying a slung rifle comfortable
- Rubber and tungsten carbide feet for grip in different environments
- Quick and easy to swap to other rifles with a suitable attachment system
- Secure sling attachment
- Supplied with storage case and a classic rifle adapter kit
- Compatible with a full range of 12mm Spartan rifle adapters.

Javelin Pro Hunt Tac

Carried off the rifle and attached in seconds, the Javelin Pro Hunt Tac features spring-loaded ratchet-style tactical legs so hunters can quickly adjust the bipod's height. The Javelin Pro Hunt Tac is ideal for hunters needing to travel long distances through woodlands and mountainous terrain; it quickly snaps into place with the Spartan magnetic attachment system and is easily swapped to other rifles, making it the only bipod you'll ever need.

And when the time comes to take your shot, the single-button Leg Lock-Out feature opens the legs and ensures they stay in the fixed shooting position.

- Track targets with the traversing function or use in locked target mode
- Cant facility for uneven surfaces, positions and terrains
- Low profile adapter makes carrying a slung rifle comfortable
- Rubber and tungsten carbide feet for grip in different environments
- Secure sling attachment
- Modular design accepts a range of different legs for different shooting
- Supplied with storage case and a classic rifle adapter kit
- Compatible with a full range of 12mm Spartan rifle adapters.

Valhalla

Optimised to provide a light and incredibly stable platform for hunters and long-range precision shooters in all environments, the Valhalla bipod attaches to tactical-style rifles with Picatinny or M-Lok rails. It can be folded under the rifle or removed in an instant for storage and transport. With adjustment for cant, the height-adjustable spring-assisted tactical legs can be altered with one hand and deployed in seconds with five pitch positions.

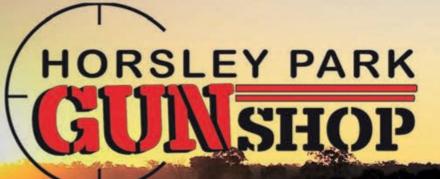
To find out more about this excellent range of bipods, ask at your local gun shop or visit www.nioa.com.au.





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Fury

Nick takes a look at the new and very different hybrid round, SIG Sauer's .277 Fury, which has a big future after being chosen by the US military as its primary combat cartridge.

A brand new 6.8mm cartridge featuring a hybrid case of brass and steel, producing chamber pressure of a whopping 80,000psi, is about to become incredibly popular. It's the SIG Sauer .277 Fury and it is replacing the 5.56 NATO round as the US military's main small-arms ammunition.

The 6.8 was selected along with a new SIG Sauer rifle and machine gun in the Next Generation Squad Weapon (NGSW) project, the US Army's most recent attempt to increase the lethality and hitting power of its military rifle and cartridge.

The official US military rifle and round has undergone many changes over time. The first US military rifle cartridge was the .50-70, introduced in 1866 and used in the singleshot Springfield rifle. It was replaced by the .45-70 in 1873. The rifle and cartridge stayed in service until 1892 when the Krag-Jorgensen bolt-action repeating rifle chambered in the first small-bore, smokelesspowder military cartridge was adopted by the US Army the .30-Army aka .30-40 Krag.



Sig Sauer's 6.8mm cartridge features a hybrid case with a brass body that's secured to a steel-alloy case head."

The rimmed .30-40 cartridge was cashiered in favour of the rimless .30-03 and the 1903 Springfield rifle, which was based on the Mauser 98 system. Military developments in Europe influenced the US to modify the .30-03. The neck was shortened by 0.07" and the 220gn round-nosed bullet at 2300fps replaced with a light 150gn bullet at 2700fps, creating the .30-06 "Cartridge Ball, calibre .30 M2".

The .30-06 served the US military well through two world wars until, in turn, it was superseded by the lighter, more compact 7.62x51mm T65 cartridge, which allowed a similarly lighter and more compact rifle. The M-14 rifle and the 7.62 NATO round were adopted in 1957.

During the Vietnam war, the

US military adopted the 5.56x45mm cartridge for their new M16 rifle, which met with some resistance from their NATO allies. Nevertheless, a series of NATO tests resulted in the 5.56x45mm being standardised in 1980 for NATO's infantry assault rifles, but they retained the 7.62x51 for their machine guns.

Recently, new high-tech developments in assault rifles, together with cartridge design, caused the US to look at replacing their M4A1, M249SAW and the 5.56 NATO with a combination that will extend the range and hitting power to better meet the demands of modern warfare.

Two very unusual cartridges contested the military cartridge contract. One, with a composite case body, was the result of a coordinated effort by General Dynamics
Ordnance and Tactical
Systems (GD-OTS), which was working closely with True
Velocity and Textron, which is allied with Olin Winchester's military division. Their Lone
Star Future Weapons RM277, however, was beaten by SIG
Sauer, which won the US
Army's NGSW contract for both the rifle and ammunition. It was adopted on 19 April, 2022.

The US military's prototype testing began in 2020 and acquainted manufacturers with valuable feedback before the second prototype test was carried out during the second quarter of 2021. The purpose of the second test was to evaluate the performance potential of three different prototype rifle systems.

Final submissions included SIG Sauer's NGSW-R and AR. SIG, which advertises itself as 'the complete systems provider', had been selling several AR-pattern rifles in 5.56 NATO to civilians for some time — the piston-driven MCX Virtus and direct gas

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PRACTICAL RELOADING

impingement M400 Tread. It was inevitable that the SIG design, with ambidextrous controls and several other desirable features, would be the US military's first choice.

The military also evaluated SIG's hybrid 6.8mm cartridge, which uses a brass body secured to a steel-alloy case head. Weight was saved and capacity increased because the brass and case head could be made thinner. In turn, this also increased case capacity to accept a larger powder charge to boost velocity.

During prototype testing, however, the army's adoption of SIG's 6.8mm hybrid cartridge surprised many who were betting on True Velocity's 6.8 SPC (Special Purpose Cartridge), a lightweight polymer case design. The US military also turned down a short-recoil bullpup design from Lonestar Future Weapons, which was nominated as one of the prime contractors in the NGSW's final stage.

They ultimately decided on the SIG Sauer rifle. Winchester's Military Division would make the 6.8x51mm hybrid ammunition for it.

Despite the logistical advantages of the 5.56 NATO in terms of how many more rounds a soldier could carry compared to the 7.62x51, the US Army decided that a 6.8mm cartridge was needed to provide increased operational lethality and handle the kind of threats encountered at longer ranges on the battlefield. The NGSW program finally settled on SIG's .277 Fury firing a 135gn FMJ 0.277" projectile at a muzzle velocity of 3000fps from a 16" barrel. It undoubtably would be able to deliver the desired amount of energy at a specific range, but the chamber pressure is a whopping 80,000 psi.

With the 6.8's high velocity, in the beginning SIG Sauer's engineers were hoping to





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A civilian version of the new SIG Sauer rifle is available at about \$US8000.

True Velocity's innovative polymer-cased ammunition missed out on selection despite being a favourite contender.

achieve a barrel life of 4000 to 5000 rounds. However, the Army's requirement for 6.8 barrels is 6000 rounds. During testing, SIG Sauer learned that its NGSW barrels could fire up to 12,000 rounds before a replacement was needed.

SIG Sauer's 6.8mm cartridge may look conventional, but it is anything but! It features a hybrid case with a brass body that's secured to a steel-alloy case head. Weight is pared away because the brass and case head can be made thinner, unlike a conventional case, which starts with a brass cup that is pressed and drawn to size. SIG's hybrid case offers increased volume (case capacity), to accept a larger powder charge, which is necessary to boost muzzle velocity. The steel-alloy case head and rim also add the additional strength needed to

handle the 6.8's higher chamber pressure.

The army chose SIG's 6.8 cartridge over True Velocity's polymer-cased cartridge because it offers several advantages. The latter was designed to save weight over the 7.62 NATO, but if the objective was simply to save weight, SIG's engineers could have replaced the 6.8 Fury's steel head with one made of aluminium, but the steel case head enables increased pressure. So the SIG 6.8 offers increased lethality and reduced weight.

Another important advantage, whether it be Olin-Winchester or Lake City ammunition factory or one in an allied country, manufacturing SIG Sauer's hybrid case is backwards-compatible with tooling and equipment already used to assemble conventional

ammunition. A major drawback with making military polymercase ammunition is that new machinery and technology would be required since proprietary sealants are required to secure a bullet in the case mouth.

Equally important: given that the 6.8 cartridge has the same length as the 7.62x51mm, even if the Army decided that it wasn't ready to field new weapons systems, currentissue M240-series machine guns could be adapted to handle the new 6.8 round with a barrel change and, perhaps, different feed pawls and a tray to accept belts of ammunition.

Additionally, when adapting the 6.8mm to 7.62-based platforms such as the M110 series, the higher chamber pressure would probably require beefing up the aluminium receivers and barrel extension, together with a new buffer and spring. These modifications could be easily carried out by armourers.

Still another advantage that favoured SIG's hybrid case is that brass and steel extracts more heat from the chamber than polymer, which is important for long bursts of automatic fire. Each time a case is ejected from the action some of the heat leaves with



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the metal case. Theoretically at least, SIG Sauer's case design should lower the barrel's operating temperatures during automatic fire, which would reduce erosion and wear and tear on critical parts much better than polymer-cased ammunition.

The decision to adopt a 6.8mm cartridge was based on reports from combat experience in Afghanistan, Africa, Iraq and Syria which indicated that a more powerful round was needed to defeat developing body armour technology at long distances.

"It was the precursor of the Next Generation Squad Weapon program," declared Brigadier General David Hodne, director of the Soldier Lethality Cross-Functional Team. The Army wasn't satisfied with the performance of the 5.56 NATO and for the first time in history a US small arms program, NGSW, initiated in 2017, was dominated by the ammunition.

The US Army had been disappointed with the performance of the 5.56mm M855A1 EPR round which has a muzzle velocity of 2970fps (and the 7.62mm M80A1) for some time. The Army specified a cartridge that would be effective out to 1200 yards and one that weighed less.

The US Army's need for extra bullet weight, energy and velocity hastened the development of the 6.8x51mm. The NGSW was obliged to bypass conventional cartridge

design in order to upgrade the military's duty carbine and light machinegun and optimise their performance.

The .277 Fury features a new, all-copper 6.8-calibre bullet designed by Picatinny Arsenal for a specific velocity range. The cartridge allows the use of a long, efficient 0.277" bullet without having the bullet extend down into the case body.

SIG's 6.8 cartridge faced stiff opposition from True Velocity who, with the aid of GD-OTS, had developed a lightweight polymer case which used CNC machines to mould, sort and assemble cartridges to exacting specifications and previously unknown tolerances.

Composite case bodies are given case necks and steel rims before being primed and having bullets seated. Cases are injection moulded, which allows True Velocity to modify the shape of the case's interior to control volume and how the powder sits inside. This capability influences powder burn and minimises waste, providing a previously unknown degree of control in case production.

Due to acceptable combustion and efficiency of the burn rate inside the case, the medium capacity cases require up to 10 percent less powder to deliver the same muzzle velocity as a comparable brass-cased cartridge. By making changes to interior geometry, True Velocity can produce subsonic rounds which reduce the noise and

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SIG Sauer's new military rifle is the XM5, while the commercial version is the MXC-Spear.

The civilian ammunition developed from SIG Sauer's hybrid case is called the .277 Fury and will initially be loaded with a 150gn Nosler Accubond projectile with a BC of .5. Muzzle velocity is 2830fps out of a 16" barrel and 3120fps from a 24" barrel.

The military has opted for the 135gn FMJ projectile in its version of the .277 Fury.

recoil for Special Forces use by moulding thicker case walls.

Another advantage: powder burn efficiency minimises muzzle flash, which is the emission of unburned powder after the bullet has exited the muzzle. In the case of the SIG rifle, though, its flash signature is virtually non-existent with the three-prong flash hider of SIG's own design.

Even with a suppressor attached, the NGSW-R and AR had to meet the US Army's classified overall length and weight requirements. Only a bullpup design made this possible. Bullpups have been adopted for military service since the British EM-2 in 1951, so the concept isn't new. Successful bullpup designs include the British SA80 and

L85, the Israeli Tabor and the Austrian AUG. The XM5, which replaces the M4/M4A1 in close combat units, is a bullpup design with the magazine located in front of the grip.

SIG weaponry is based on SIG's popular MCX line, a piston-driven derivative of the AR15/M16 family that the US military already uses. The gas-operated XM5 has a 13" barrel and an overall length of 34" with the stock extended. The SIG assault rifle is a modular design and soldiers can swap out every part on the rifle using simple hand tools.

The XM5 replaces the M4 carbine, the standard assault rifle of the majority of US military forces, including the Navy SEALs. The XM250 replaces the M249 Squad Automatic Weapon. The contract covers about 40 total weapons — 25 XM5s and 15 XM250s. The US will purchase 250,000 rifles for the army and other US military services and potential foreign military sales customers. Winchester has been contracted to produce 20 million rounds of 6.8 ammunition. But the army will refurbish the Lake City Ammunition plant to produce 6.8 ammunition by 2025-26.

The XM5 and XM250 will be fitted with the XM157 Fire Control Unit, an optic that increases accuracy and lethality for close combat forces. The XM157 integrates a 1-8x variable-power optic with backup etched reticle, laser rangefinder, ballistic calculator, atmospheric sensor suite and compass.

The new 6.8x51mm is fast, flat shooting and offers a substantial performance advantage over both the 5.56 and 7.62 NATO. SIG will make a civilian semi-automatic version of the XM5 chambered for the .277 Fury, to be designated the MCX-Spear.

Yes, Virginia: the hybrid cases can be reloaded.

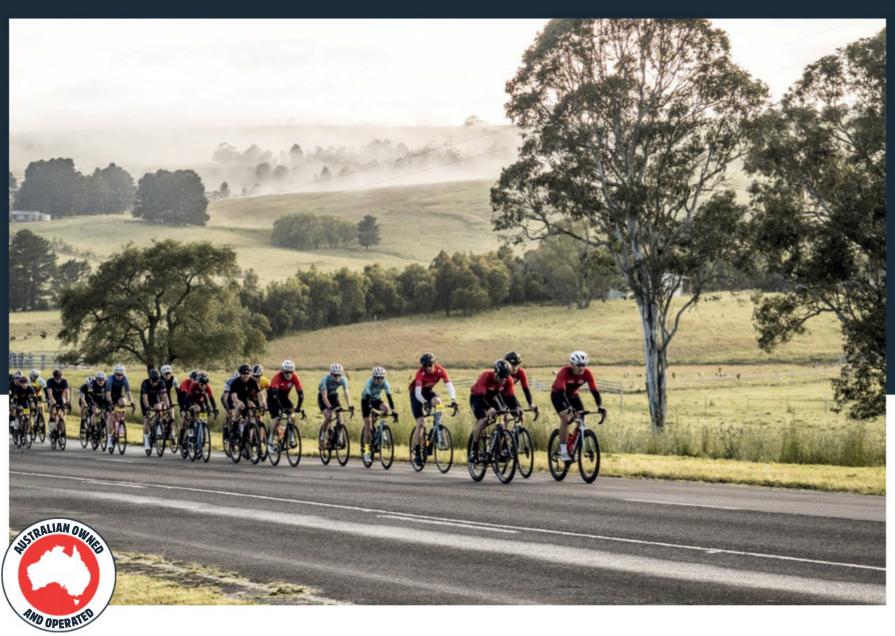




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Roles reversed

As hunters, it is up to us to hunt and stalk up to game; checking the wind and being quiet. This time, Chloe has the tables turned on her.

IT was an early morning start as Old Pop and I headed out to Uncle Craig's for a quick coffee and to get changed into our hunting gear. It had been 23 years since either of us had been back out to the block. I was only a baby, sitting in the back of Uncle Craig's car, covered in ice-cream, when Uncle Craig first got the property.

It was a beautiful drive as Old Pop and I followed Uncle Craig out to the block, about 15 minutes from the house. On arrival, Uncle Craig pointed out the direction to the paddocks we would be hunting and we set out.

As we got to the top of the hill, I noticed and pointed out a white doe, a yearling and a fawn in the neighbour's block, the white doe standing out like a sore thumb against the lush green pasture. With no movement in the basin below us, we slowly made our way down and around the hill, the wind blowing straight into our faces. After a hundred metres or so, Uncle Craig paused and told us that we were not too far above a shelf in the hill.

We took another few steps. I pointed out two does feeding on the flat, totally oblivious to us. Nodding, Uncle Craig motioned to keep moving forward, then quickly stopped and sat down. We followed.

"Buck," he whispered and pointed to two palms that had just become visible.

RIGHT: Chloe, Uncle Craig and a memorable trophy worth preserving.

Whispering again, Uncle Craig asked what my next move was going to be.

Just as I started to say I was going to make my way further around the hill for a better view, I was cut off by the appearance of the buck. His eyes were locked onto us. My gun was on the grass next to me, the chamber still empty. It felt like time stopped as he stood proud; it was like he was waiting for something to challenge him for his girls. Thank god the wind was still perfect.

Slowly, he turned his head and started moving up to our right, pausing every two or three steps to stare directly at us.

It reminded me of the schoolyard game 'Red Light Green Light', making quick and quiet movements when he was not looking, only to freeze every time he stopped.

Quietly and quickly, I loaded my firearm where it lay, not closing the bolt completely to keep it safe. Slowly, I reached to pick it up but that was enough for the unsure buck to startle and break into a trot, continuing his path to get our wind.

I had seconds. I grabbed my gun and rested it on my knee. With Old Pop behind me and Uncle Craig above, I knew everyone was in a safe position for me to take a shot if I wanted. Old Pop mimicked the sound of a doe, breaking the silence and stopping the buck. It turning to us. I closed my bolt and squeezed the trigger, dropping him within 50 metres.

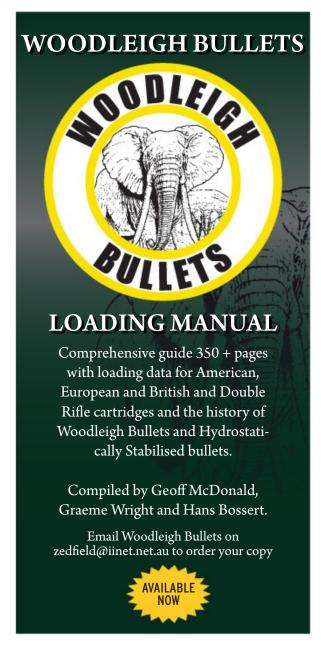


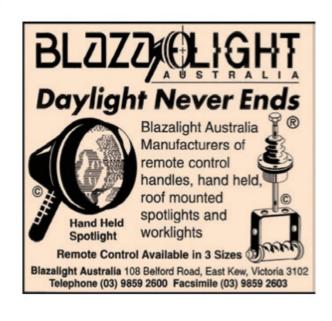
The buck's
eyes were
locked onto
us. My gun was
on the grass
next to me, the
chamber still
empty."

There were tears and hugs all around. Another deer down humanely with one 90gr Sako .243, filling the freezer once again — a trophy in itself.

The big guy's currently off at the taxidermist for a lasting memory of how lucky I was and how lucky I am to be able to hunt with Old Pop and Uncle Craig.













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