



Why cats trump all other feral targets

SPECIES GUIDE: Sambar

TESTED

Voere LBW boltaction switch-barrel

> Swarovski's tracking-enabled binoculars

Ridgeline summer camo clothing

DUCKS, QUAIL AND FOXES

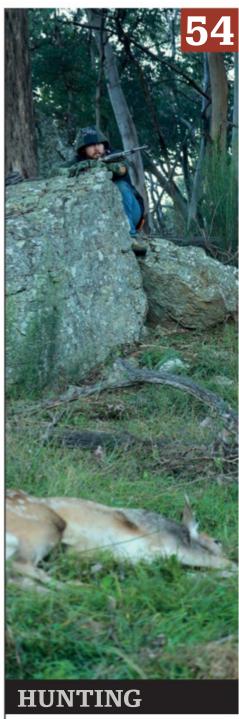
Big fun despite small bag limits

FALLOW HUNT A plan that backfired!





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Feral catastrophe 14

No matter what you're hunting, be ready to shoot cats on sight! David Hughes never passes them up.

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Mick Matheson plots the perfect hunt to get Cruz's first buck, but nothing goes to plan!

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Leon Wright made the most of duck season despite low bag limits, and added quail and foxes to the tally.

Species Guide: Sambar 66

Renowned as the most challenging of all game to hunt in Australia, sambar are amazing animals. Jared Matthews tells why.



TESTED

Voere LBW Walnut 22

The latest Voere LBW has all the hallmarks of a classic European rifle but boasts thoroughly contemporary performance.

Swarovski EL Range binos with Tracking Assistant 28

Swarovski can help you find your way as well as your target.

Ridgeline summer clothing 32

This lightweight combination from the Ridgeline Performance range keeps you fresh in the heat.

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ON THE COVER

A feral cat eyes a crow over roadkill. Photo by John Carnemolla/iStock







Three from three ... or not?

When killing becomes chaotic, how can you be proud of your hunt?

YOU'D be quite happy with three deer from three shots, wouldn't you? I would be, too, in a normal situation. This one wasn't. In the aftermath of the shooting, I couldn't work out quite how it'd happened. I spent a week wondering until the deer were butchered and it all became clear.

Dodge, a mate who runs Accurate Hunts, owed me a hunt and I wasn't going let it slip. He's also the secretary of Nepean Hunters and Anglers and happened to want two meat deer for a demo day at the club. We went out at the crack of dawn and the stalk went so well you'd think he'd scripted it.

He got me within 140m of a mob of 12 does and young deer, who fed on the opposite slope of a gully without a clue we were there. I shot the first deer and she dropped dead on the spot. The mob ran only a short way before pulling up.

A younger one presented an easy shot at perhaps 160m. Just as I put that point-of-no-return pressure on the trigger, it stepped forward. The shot that I was convinced would be another deadly hit to the chest now looked like a possible gut shot. We heard the hit and the deer leapt forward rather than dropping. I swore as I quickly cycled the bolt.

Luckily, these deer weren't hunted much and just went a little further up the hill. This is the part where I'm not clear exactly what went on. I lost track of the injured animal, but at the time I thought I knew which one it was.

I chose my target and fired. The deer appeared to do two things at once: it dropped dead on the spot and it ran away and then fell down, kicked and died. Eh? Had I hit two?

The mob bolted. Confused, I was now sure the injured animal had gone with them.

When we got over there we tried to work it out but failed. All I could think was I'd gone out for two deer but ended up killing three and letting a



Dodge got more meat than he'd bargained for and that smile on Mick's face is a forced one.

wounded one get away. I was really pissed off with myself.

We gutted the deer and took them back to the cool room.

A week later, Dodge butchered the trio and rang me with relieving news. Yes, the first deer was a clean, instant kill. Yes, I had hit two deer with one bullet: the one that ran a little was the one I'd aimed for; the other had been completely obscured behind it and had copped the spent bullet in the neck.

And then Dodge reported the best bit. The neck wound wasn't the only injury. That deer had also been hit in the rear of the chest. This was my wounded deer. Perhaps that's why I'd lost track of it; it was hidden behind the other.

So it was indeed three deer with three shots. All the same, I don't feel much better about it because I can't claim full control over the outcome.

When your hunts don't go to plan — like in my story on page 54 — you can laugh at yourself. When *shots* don't go to plan, it's more serious. At least in this case it all worked out well.

MICK MATHESON Editor

SHOOTER

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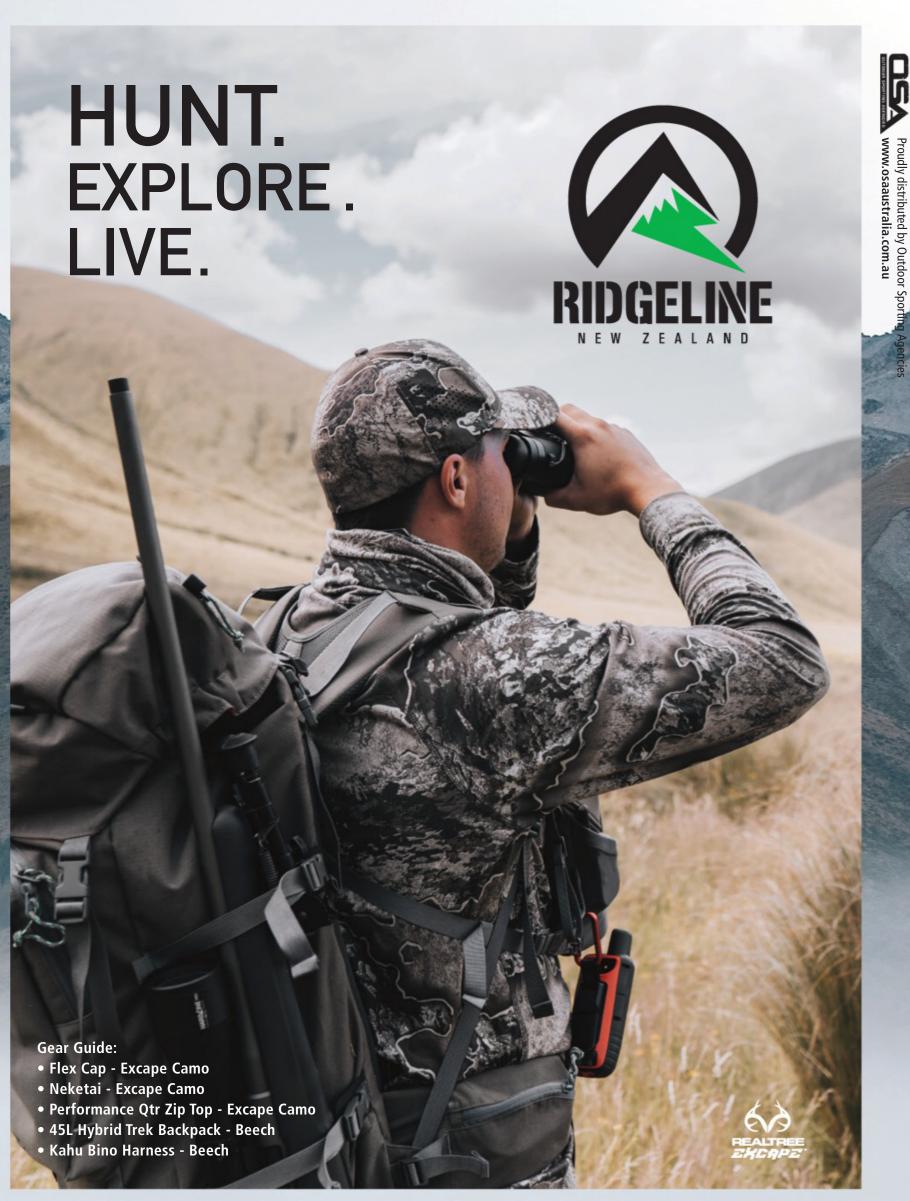
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TECHNICAL ADVICE FROM THE GURU - BY NICK HARVEY

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

The Carl Gustav saga

Recently, I became the proud owner of an FFV Carl Gustav Model 2000 rifle in .270 Winchester, like the one you used to own. I am really happy with this rifle, which appears identical to a Zoli rifle my mate has. Obviously, there's a story here? What can you tell me about the history of these rifles? Bill Davis

A The Carl Gustav has an interesting history. It all began with Husqvarna, which introduced a lightweight small-ring Mauser rifle in the early 1950s. In the late 1960s, Husqvarna dropped the traditional Mauser in favour of the Model 1900, which had a unique dovetailed locking lug system.

Later, Husqvarna sold its gun making business to FFV, a state



owned enterprise which made military AK4 rifles and Carl Gustav 84mm rocket launchers. After sales of the 1900 stalled, FFV used its modern manufacturing facilities to bring out a new, improved version, the Model 2000, along with the Models 3000 and 4000. The last two



This wapiti-red deer hybrid was anchored with a 189gn bullet from a Zoli FFV in .30-06 at about 250 yards.

were based on the Sauer action.

Swedish hunters preferred the Model 1900 and it was soon being made by Hellenic Arms in Greece and Antonio Zoli in Italy. As a result, FFV found itself competing against its former product, which was now being made by foreign competitors, and sold the rights of the rifle to Winscam, a small Swedish firm.

At the present time I believe Zoli is the only company making this attractive and thoughtfully designed hunting rifle. You and your mate are lucky; I often wish I'd never sold my Model 2000.

Why such mild recoil?

I have a Winchester Model 70 with 2-7x Leupold scope chambered in .300 Win Mag. My pet load drives the 180gn bullet at a velocity of 2950fps ahead of 71gn of RE-22 for a muzzle energy of 3479ft-lb. This outfit is fairly light yet recoil is surprisingly mild. Why don't I feel more kick from such a light outfit churning up more than a tonne and a quarter of muzzle energy? David Driscoll

A The conservation of energy does not apply when considering the energy of a bullet and the energy of recoil. The gas pressure driving the bullet down the barrel also drives the rifle rearward, causing the recoil. The rearward velocity of the rifle is much lower than the

forward velocity of the bullet because the rifle is a lot heavier than the bullet.

Since kinetic energy is a function of the square of the velocity, the rearward energy of recoil is much less than the forward energy of the bullet. That is why it is possible to shoot any rifle without being injured by the recoil.

For recoil calculations, one uses the theory of conservation of momentum. The momentum of a body is expressed as the product of the mass of the body times its velocity. Thus, we can say that the rearward momentum of a firearm in recoil is equal to the forward momentum of the bullet plus the forward momentum of the bullet. From this, and the weight of the rifle, it is possible to calculate the velocity and energy of recoil.



The Remington 700 Sendero chambered in 7mm STW is a superb choice for taking deer at long range."

Trim dies need careful adjustment

I recently bought a file-and-trim die for trimming fired .257 Roberts cases. I wanted less variability than could be achieved with a lathe-type case trimmer. But when I measured the cases after trimming and deburring, they varied as much as .006". What am I doing wrong? Mick O'Shea

A Your problem is probably the result of an improperly adjusted die or cases being unevenly lubricated.

Good quality dies are made with a minimum-sized die interior; only the neck is left slightly oversize. Some handloaders think that all they need to do is screw the die into the top of the press and adjust it so the shellholder touches the base of the die. But there's a bit more to it than that.













Cone-to-head length is generally kept to maximum to avoid pushing the shoulder back. The die is made to produce consistent case length when the case is fully inserted into the die with the top of the shell holder butted firmly against the die base. When a case is pushed into a trim die, the body-sizing action generates friction against the die wall that tends to push the die away from the shell holder.

If the die was initially adjusted for light contact with the shell holder without a lubricated case inserted, the natural spring of the press will allow the die to move slightly. If there is a variation in wall friction caused by inconsistent case lubrication, cases will enter the die to greater or lesser depths, causing varying trim lengths.

The problem is compounded by a press of lower rigidity or case designs having more body taper.

All this can be avoided with proper adjustment. Screw in the die until it contacts the shell holder lightly, turn the die into the press in small increments (no more than an eighth of a turn at a time) until an unsized case can be run into the die, leaving no gap between it and the shell holder. Take great care the case is making proper contact.

If you are not already doing so, cases should be lubricated by rolling them on a pad, to ensure more uniform distribution of the lubricant on the case.

Employing proper procedures, the as-trimmed case length will vary no more than +/- .0005", and the trim die will provide the kind of close tolerances you expected.

Measuring pitch in a shotgun stock

I've been told that if I change the 30" barrel on my shotgun for a 26" barrel, the gun will have less pitch. If

pitch is determined by the angle of the buttplate to the line of sight, both would remain constant, so why would the pitch change? Bradley Donaldson

A The pitch will change for a particular shotgun if barrel length is changed. But pitch figures are usually given in inches, not in degrees of angle. By common practice, the measurement will vary with barrel length.

To measure the pitch in inches, the gun's butt is placed flat on the floor with the upper surface of the gun touching the wall. Then the distance in inches from the wall to the top of the gun's rib or muzzle is the 'down pitch'. If the receiver and the muzzle touch the wall simultaneously, there is no pitch or 'neutral pitch'; if the muzzle touches the wall and the receiver is still some way from it, 'up pitch' is present and the measurement might be taken from the wall to the heel of the stock or to some other specified point on stock, action or even barrel.

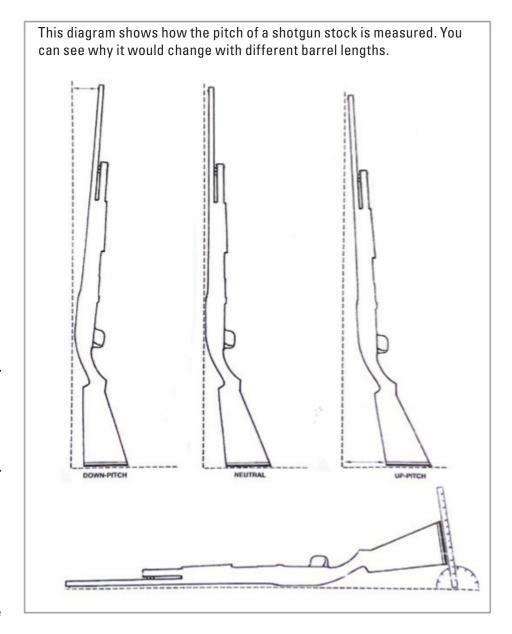
You can measure pitch in degrees of angle if you wish. Barrel lengths are not a factor. To do this, the gun is laid on the floor, trigger up. A straight edge is held against the buttplate and the angle of the straight edge to the floor is taken with a common protractor.

Hold low on a slant

I recently read an article in an American magazine where the author was hunting in steep, mountainous terrain. He stated that he had to remember to hold low because he was shooting on a steep slope. But he also said that the effect was the same whether shooting uphill or down. How can this be?

Arthur Reynolds

A Though it's a bit counterintuitive, if you think



about it you can see that the force of gravity is applied at less than the usual 90-degree angle to the bullet's flight path, whether the shot is uphill or down. So the drop is less, requiring a lower hold on the target.

The effect is negligible except at the steep angles and long ranges commonly encountered in mountain hunting. There is quite a difference in bullet path when the same 7mm Rem Mag 150gn load is fired with the rifle held level and at 45 degrees. At 400yd, for example, the bullet fired at an angle has about 8" less drop.

What is a Sendero?

I just bought a secondhand Remington Model 700 Sendero in 7mm STW. My first question is: what is this Sendero label the rifle carries? I know the rifle has enough velocity and knockdown power to take

game at long range, so my second question is: what weight bullet would you recommend in it for deer in open country? A good handload that's not too hot? And what is the maximum range at which I can shoot a deer with this rifle and cartridge?

Brian Campbell

A 'Sendero' is a trail or pathway or cutting which runs through forest or thick brush. They usually run dead straight, often for miles. I killed a white-tailed deer and a moose on two different occasions in Alberta a few years ago at longish ranges.

For deer I would recommend a good controlled-expansion bullet like the Hornady 139gn InterBond or Nosler AccuBond over 73gn of AR2213sc for about 3260fps. That's not a hot load and it's one I've found very accurate.

I think that the Remington





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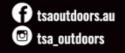
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Me, I prefer to stalk as close as I can if the terrain allows it, rather than take a chance at 300 yards or more.

Right- or left-hand twist?

Why do some rifle barrels have a right-hand twist and some other rifle barrels a left-hand twist? Which is better? I read somewhere that all barrels made for countries south of the equator have left-hand twist. Is this right? Douglas Harvey

A The majority of firearm barrels are rifled with a right-hand twist. One notable exception is Colt, whose handguns have barrels with a left-hand twist. Also, the British have often employed a left-hand twist.

It has been said that the British used a left-hand twist so that the resulting left 'drift' would be in the opposite direction to the right deflection most commonly resulting from the Coriolis force in the northern hemisphere. In the southern hemisphere the deflection from the Coriolis force would most commonly be to the left, indicating that a right-hand twist and resulting drift to the right would serve better below the equator.

Drift is the deflection of a bullet which results from the fact that a bullet does not fly through the air exactly 'point-on'.



You and your mate are lucky; I often wish I'd never sold my FFV Model 2000."

A bullet fired from a barrel with a right-hand twist flies with its point very slightly displaced to the right of the trajectory, while a bullet from a left-hand twist veers left. Deflection due to the Coriolis force is caused by the rotation of the Earth during the bullet's flight. Both of these deflections are so small that for all practical purposes they can be ignored.

The reality is that there is no practical ballistic advantage to either twist, and I don't believe that the British adopted the left-hand twist for ballistic reasons. It is more likely that the direction of each twist was chosen by individual manufacturers for tradition or some other obscure reason that's been long forgotten.

The powerhouse .444 Marlin

I own a Marlin leveraction in .444 Marlin. It has plenty of punch at both ends. I've used it with 240gn bullet on pigs and fallow deer and it has always got the job done, but I'd like to use it on sambar and maybe buffaloes. Can you recommend a load for big game? What can you tell me about this cartridge? Is there another cartridge it is based on?

Ray Barret

A The .444 Marlin has an interesting history. It was designed by Marlin's director of research, Thomas Robinson, and Arthur Burns, a metallurgist. They began with a .30-06 case drawn straight with an unfinished head and turned to form an extractor rim.

It was manufactured by Remington, which offered it with the same 240gn bullet used in the .44 Rem Mag, but at about 600fps higher velocity. While the 240gn bullet has 2942ft-lb of muzzle energy, its low sectional density is only .186 and it lacked penetration on game larger than white-tailed deer.

For sambar I'd load the Speer 300gn over 52gn of AR2206H for about 2100fps. Years ago I landed a Speer bullet in the forehead of a buffalo and he dropped dead on the spot.

Lee Enfield No 4 Mk 2

For many years my grandfather did a lot of range shooting with a .303. A

The .444 Marlin is a powerful round in lever-action rifles. Driving a 265gn bullet at 2400fps it churns up 3389ft-lb of muzzle energy.

couple of years ago he died and left me a Lee Enfield rifle marked "No 4 Mk 2 (F) 11/49" which has a serial number in the PF series. I've enquired about its history at a number of gunshops but without any success. A guy at the last shop told me to write and ask you about it. Can you help? Dave Andrews

A The No 4 Mk 2 rifle was an improvement over the World War II vintage No 4 Mk 1 and Mk 1*, approved in December 1947 and instituted in March 1949.

The trigger was pinned directly to the receiver, as opposed to being pinned to the trigger guard as on earlier versions. The reason for the trigger change came about because during World War II unseasoned stocks on some rifles warped, causing the sear and trigger to bind. It wasn't until 1949 that this problem was rectified by the new trigger pinning.

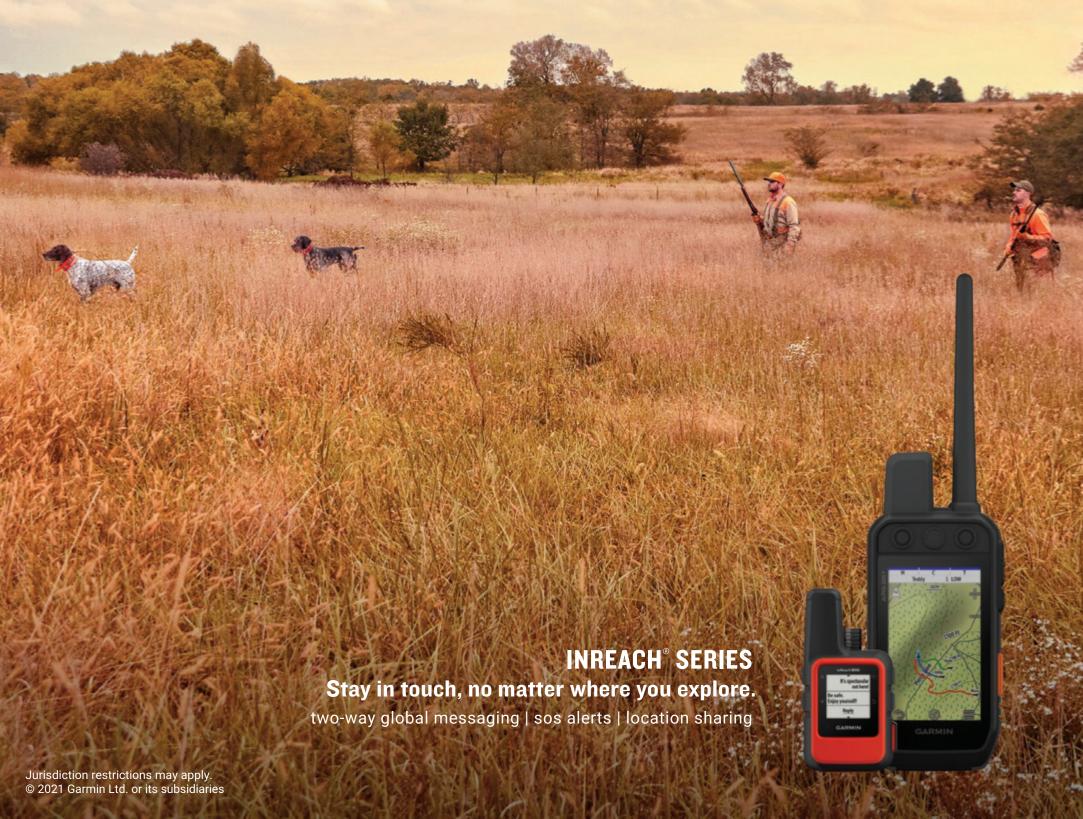
The new trigger system was not only installed on the new Mk 2 rifle, but was also added to some of the Mk 1 and Mk 1* rifles still in inventory, and these were re-designated the No 4 Mk 1/2 and Mk 3 respectively.

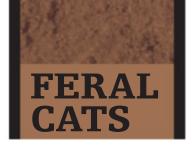
The Mk 2 also got a new blade bayonet and new barrel with five-groove rifling. The non-adjustable wartime flip sights were also replaced with elevation-adjustable rear sights.

The "(F) 11/49" marking indicates your grandfather's rifle was made at the Royal Ordnance Factory (ROF) Fazakerley in Yorkshire, England in November 1949. "PF" was one of the common serial number prefixes used on the No 4 Mk 2.



IS CLOSER THAN YOU THINK





Feral cat-astrophe

No matter what you're hunting, be ready to shoot cats on sight! David Hughes never passes them up

eral cats have a disastrous impact.
They're robust and adaptable. They
occupy every type of landscape across
literally 99 percent of Australia. Only a few
islands and feral-free fenced sanctuaries are
exempt from their ravages. Their numbers are
difficult to estimate but conservative recent estimates
range between 1.4 and 5.6 million, depending on
seasonal conditions.

WHEN we consider that each feral cat typically eats 5-30 animals a day it is easy to appreciate the scale of the impact of these relentless hunting machines.

What part might hunting and trapping play in controlling feral cats?

Like many hunters, I have shot the odd feral cat here and there. Over decades of wandering through varied landscapes, I have occasionally knocked over a cat when a chance presented.

A few years ago I was in Arnhem Land chasing water buffalo. My brother Neale and I were doing a slow cruise in our hired Hilux in the middle of nowhere. He was at the wheel and brought us to a sudden halt when he spotted a ginger cat watching us, only 30 metres off. From the passenger side I hurriedly manoeuvred the .375 H&H magnum over to Neale.

As he lined up, the moggie decided we were bad medicine and took off for the bush. Nonplussed, Neale tracked it through the low power scope and in a trice the 270gn Barnes caught up with the critter. Not a classic calibre for cats but the result was emphatic!

Many feral cats are shot like this as incidental catch, but there are a few dedicated cat-hunting yarns that come to my mind. The most recent was riding as an observer on cat spotlight hunts with a land manager on an Australian Wildlife Conservancy (AWC) sanctuary at Mt Gibson, WA. This was dry marginal country, red dirt, gimlet gum and scrub.



ABOVE: Focused cat hunting can be productive in good seasons when populations of prey species erupt. David spotted this cat skin on the wall at the Ross River pub, west of Alice Springs. The explanatory note indicated that a single

hunter accounted for over 70 cats in four months.

RIGHT: This moggy did not survive an encounter with a 270gn Barnes X during an Arnhem Land buff hunt. David's brother Neale walloped him out of the window of the HiLux.





Of the evening we'd head out after dark for an hour or two, doing a circuit of the tracks around the 8700ha feral-free fenced area. A cat's eyes shine very brightly in the light, making them quite recognisable. We knew there were cats about, because they were killing the ecologist's chooks, leaving footprints in the fresh dust of the roads and showing up on trail cameras. However, despite many hours of spotlighting, we saw neither hide nor hair of a feline.

This sort of hunting quickly becomes expensive (the cost of fuel) and boring. Not many hunters will put in all the hours for such low yield, given that the animal has no usable meat nor a beautiful pelt to keep as a memento.

However, the thermal imaging gear that is being rapidly adopted by the hunting fraternity should improve the efficiency of the dedicated cat hunters.

In some particular situations, dedicated cat-hunting may be very productive. Around rubbish tips is one such case. Cat population density can be very high around dumps, where the supplies of waste food and scavenging rodents are an irresistible magnet for feral cats.

Many decades ago, most little country towns had their own tips, which were unmanned but regularly bulldozed into piles by the council. I grew up in such a



We knew there were cats about, because they were killing the ecologist's chooks."

town, and one of the favourite entertainments for young blokes included shooting cats at the dump. My young brother became a dab hand at the activity, using a .22 rimfire and handheld spotlight to head-shoot felines. In one campaign lasting six months, he killed about 80 cats at the tip.

Today, of course, that kind of hunting would be very hard to pull off unless you were a contracted professional shooter.

Trapping can pay better

dividends than shooting, but again requires lots of effort for meagre return. In the month of my stay as an AWC volunteer at Mt Gibson, the land manager caught just one moggie, despite having numerous traps out at any time. These traps were both the common sort — made of heavy gauze wire and a door that drops when the bait is moved — and the more sophisticated 'cat-a-vault'.

This latter trap was developed by cat-trapping specialists. It





comprises a wire cage trap sunk into the dirt, and covered over with natural materials. Its entrance presents as a black hole to entice curious felines. The idea is that a cat goes in and treads on a plate which causes the door to drop.

There were a few of these set up around the perimeter of the sanctuary's exclosure fence, but none were successful in my time there.

Another way I unintentionally caught cats in the old days was as

by-catch when trapping rabbits. In that era we used steel-jawed traps, another casualty of the advance of social standards. Young teenagers made good pocket money catching rabbits, which we sold to the local freezing works for \$1 a pair, skin on. I think they mainly went for making Akubra hats.

When we set rabbit traps, something else would sometimes put their foot into the trap. When it was a cat, the hissing, spitting result was quite a challenge to the

ON THIS SPREAD

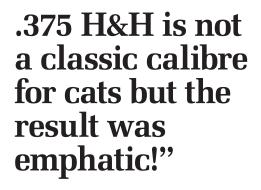
Teral cats left prints while stalking the perimeter fence of the AWC Mt Gibson sanctuary. Inside the fence the sand was liberally covered in the scribbles of the reintroduced small native animals going about their business. Outside the fence, the surface was bare.

A feral cat caught in the act of killing a native mammal. Trail cameras add

valuable information that otherwise would be very difficult to obtain. AWC also puts GPS trackers on wild cats to study their movements.

An AWC intern releasing a trapped woylie (brush-tailed bettong) inside the exclosure fence at Mt Gibson. In the absence of feral cats woylies are thriving.





average 13 year old — especially if you'd forgotten to bring a wheat bag to throw over it until you either let it out or caressed its cranium with a stick.

Cats are tough and stick tenaciously to life — more so than any other animal that I know.

Neale was telling me a yarn in which he chanced upon a cat drinking from a shrinking outback creek. He was pig hunting and armed with his trusty .308

Remington. He spied the moggie as he ever-so-slowly poked his head over the bank of the creek, thinking there might be a toothy hog taking a kip at the water's edge.

At the shot, the cat flew up the bank and disappeared over the top. The range was close enough, so Neale was pretty sure his aim was good. He found the very dead cat just over the bank. It had a huge hole in it yet it had mustered the wherewithal to run about 15 metres up and over the bank!

As a kid we had a pet cat, like

myriad other households. Our de-sexed family pet went hunting routinely, which reflects the root cause of the cat problem. It left many birds and dead kitten rabbits at our back doorstep.

Cats are innate killers. They keep killing even when they are not hungry. This Jekyll and Hyde character of our pets causes our allegiances to be torn, because our emotional attachment to the family pet leads to us making excuses for them being instinctive killing machines.

Cats in Australia, companion and killer, published by the CSIRO, is one of the most authoritative





ON THIS PAGE

There is no one more dedicated to eradication of feral cats than land manager John Ireland. He trapped this one on Mt Gibson station during David's month-long volunteering stint.

This feline fell victim to Neale's combo gun – a Marocchi Finn 612 SD with .223-calibre upper barrel and 12-gauge lower barrel. The LED torch on top makes it a versatile unit when spotlighting.

6 The cat-a-vault trap developed by AWC. These are employed outside several sanctuaries to assist in reducing the cat population in the immediate vicinity.













ON THIS PAGE

Groundfeeding birds like this Australian ringneck are prime targets for feral cats.

This Mt Gibson feral was enticed into the trap with a nice turkey neck. The trapping program aims to reduce the risk of feral incursion from outside the fence.

A typical trap set-up. The baited trap can be monitored by a trail cam to see whether cats may be investigating the trap but not going in. In such cases a more elaborate arrangement with several traps may be employed.

references around. The authors, Woinarski et al, have compiled an amazingly detailed bible of anything to do with cats. Most of the facts and figures I have cited are drawn from this source.

Some of the most convincing case studies for cat depredation relate to islands where the introduction of cats has been scientifically correlated with catastrophic decline of local birds and animals. In other cases, the removal of cats from islands has been correlated with fantastic recovery of populations rendered extinct or close to it.

Similar evidence has been extensively documented by AWC as part of their validation of the effectiveness of their feral exclosure sanctuaries. Bilbies are now running free and breeding in NSW for the first time in a century. At Mt Gibson, eight species are thriving after being regionally extinct for living memory. Mala (Rufous bettong) now live and breed in the 9400ha Newhaven sanctuary near Alice Springs. Similar stories have been documented for all the fenced havens across the country.

While we can readily appreciate the benefits of feral-free enclosures, the challenge of cat control outside the fences remains. Ecologists remind us that unless we kill more than 57 percent of the standing cat population every year we won't meaningfully reduce the overall numbers. Put another way, culling



only works long term if we kill cats faster than they can breed.

If we assume the minimum feral cat head count Australia-wide is 1.4 million, we'd need to be culling about 800,000 a year to make a difference long term. A 2020 CSIRO report estimated the feral cat kill per year as 316,030. This falls short of the target, but if we consider a couple of issues the number is actually tantalisingly close to a workable solution.

First, a number of the right magnitude was reported but in the absence of any integrated plan to encourage landowners and other stakeholders to participate. Second, if we look at the realistic option of a regional focus for culling based on the type of environment, density of feral cat populations and ease of hunting, then culling looks a lot more interesting as a viable proposition.

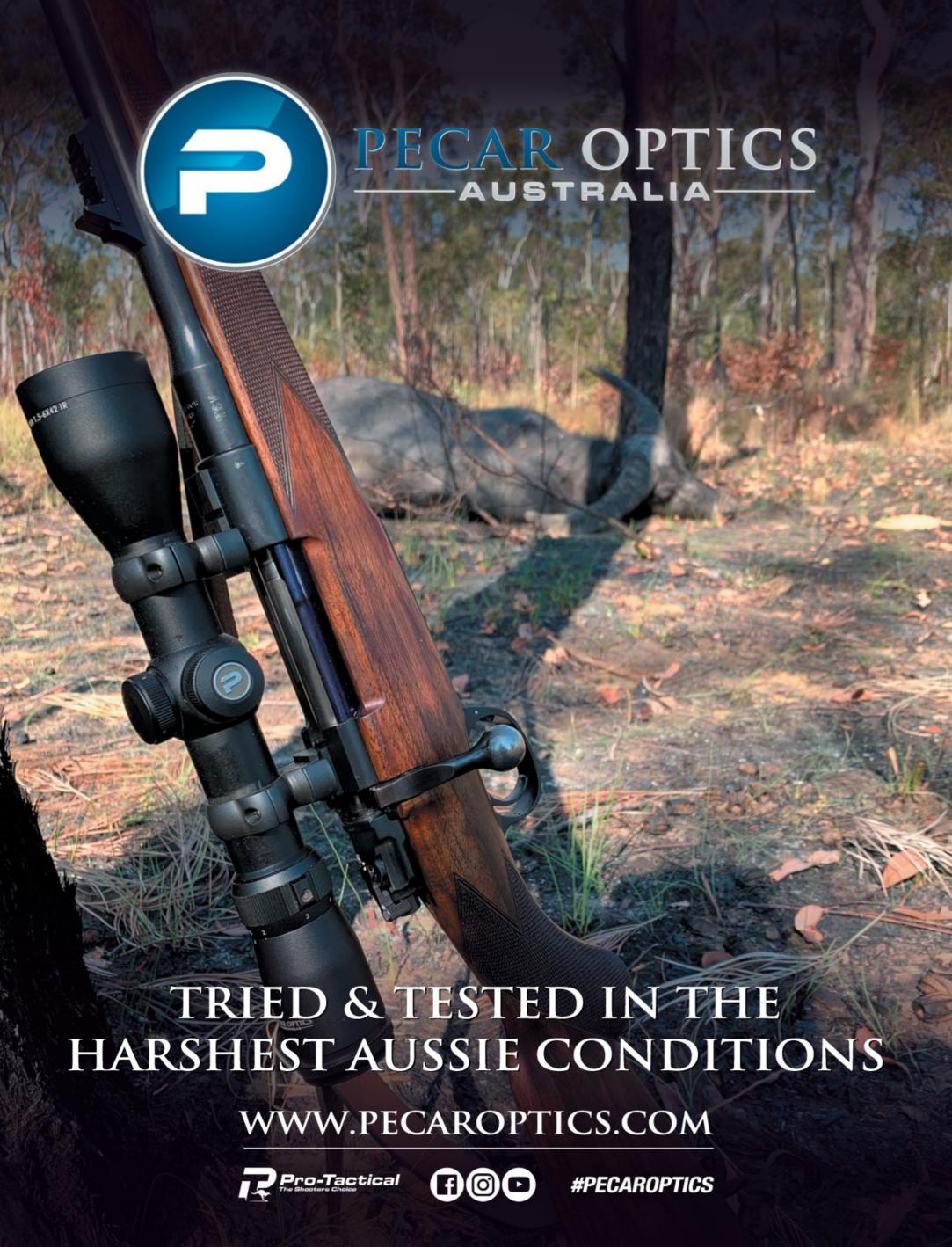


For every cat killed, five to ten native creatures' lives will be spared each and every day."

While it might be the case that hunting can never be an effective means of controlling cats on a landscape scale, I draw comfort from the certainty that for every cat killed, five to ten native creatures' lives will be spared each and every day that the cat would otherwise have been out there as a predator.

Yes, sooner or later another cat will take its place, but at least for the intervening period there is a transient cessation in the carnage. Especially so if the cull occurs before the peak breeding season of spring and summer.

We hunters can do our small bit in the field, as well as raise awareness of the detrimental environmental impact of cats, and support the great work of evidence-based conservation outfits like AWC and Arid Recovery. These organisations now have abundantly successful track records of reintroducing sustainable native populations by excluding feral cats from quite large sanctuary areas.





The latest Voere LBW has all the hallmarks of a classic European rifle but boasts thoroughly contemporary performance.

woten bolt-action with a high-quality classic-styled walnut stock. Available in Australia in standard calibres from .222 Remington to .30-06 and two magnums — the .300 Win Mag and .375 H&H — it offers a unique barrel and calibre changing system.

Traditionalists will appreciate the Voere LBW rifle not only for it's handsome dark-hued walnut stock but for its versatility and novel design features usually only found on much more expensive rifles.

The LBW has a modular aluminium-alloy receiver, a detachable magazine which protrudes slightly below the belly of the stock, and a nicely curved trigger. The rifle's overall appearance is elegant and gives an impression of quality.

The receiver is large and blocky, with a pleasingly

streamlined appearance. The rear of the round-topped receiver is sharply angled and the cocking piece shroud is contoured to blend in with the rear lines of the receiver. The sidewalls are angled and dished along the left side. The magazine well is made as an integral part of the module.

The LBW is cocked on uplift of the bolt handle and a red-dot cocking indicator appears on the rear end of the



locks into the barrel insert, neither the alloy bolt body nor the receiver are under any stress from firing."

Since the bolt

The locking arrangement is a strong one and, except for the difference in the number of lugs, is the same as used in the Browning BBR. Evidently, Browning adopted it after Voere started using it.

The one-diameter alloy bolt body has four flutes located on the top and another one below the groove which serves as the bolt guide as well as a bolt stop. There is no collar or reinforcement where the root of the bolt handle joins the bolt body. Nonetheless, the bolt handle serves as a fourth safety lug by engaging an L-shaped notch in the rear of the receiver.

An angled steel insert in a slot in the front upper corner is a cam providing initial extraction power on the uplift of the bolt handle and seating power on the lowering of the handle.

Voere fits the barrel for minimum cartridge protrusion. In the test gun there was only a 0.0127mm (0.005") gap between the bolt and breech face. In addition, that part of the cartridge head which protrudes from the chamber is encircled by a bolt face counterbore some 3.175mm

protruding firing pin when the rifle is in firing mode. The two-position safety is a serrated button handily positioned on the right side behind the bolt handle. The bolt is removed by pressing a release catch on the left side of the bridge.

The bolt is massively proportioned and its alloy body has a diameter of 23.8mm (0.936"). The separate bolt head is undercut to a

17.5mm (0.690") diameter behind and between the trio of non-protruding lugs positioned in a symmetrical 120-degree pattern around the bolt head. This results in a low bolt lift of 60 degrees. All three lugs are of uniform size — 15.5mm (0.610") long and 11.2mm (0.441") wide, which provides great strength.

Rather than having the locking seats machined directly into the rear end of the barrel, the seats are formed as part of a separate insert ring with a smooth hole through its centre to accept the bolt. The insert is probably made from Stellite, an extremely hard metal ideal for the purpose. Seated behind the barrel, it appears to be pressed into place, but may be threaded. Either way, the flat breech end of the barrel is jammed tight against the insert to hold it securely in place.







Pressing inward on both catches expels the magazine into your hand under spring pressure."



Voere LBW

Manufacturer: Voere Prazistechnik, Kufstein, Austria

Type: Turn-bolt action with interchangeable barrel system

Overall length: 113cm (44.5")

Weight: 3.3kg (7.25lb)

Barrel length: 610mm (24")

Calibres: .222, .223, .22-250, .243 (tested), .270, .308, .30-06, .300 Win Mag and .375 H&H

Stock: Selected European walnut, classic-style, chequered, with cheekpiece and palm swell

Length of pull: 37cm (14.55")

Dimensions: Drop at comb 19mm (3/4"); drop at heel 12.5mm (1/2")

Price: \$1950; extra barrels, \$1100; extra bolt head, \$275; Picatinny rail, \$145; Pecar Optics scope rings, \$69-\$99

Contact: Pro-Tactical, protactical.com.au

(1/8") deep interrupted only by a narrow 5.9mm (0.233") wide extractor slot.

The Voere's breech tends to entrap and control any escaping gas as it is blocked off at the rear by an enlarged shoulder on the end of the bolt head, except at the bottom where it gets vented down the feed ramp into the magazine well. Gas inside the receiver ring is vented through two ports, one on either side of the steel insert, aligning with holes in the receiver ring.

Any gas that may enter the bolt through the firing pin hole is blocked by the head of the firing pin and vented through two small holes in the right side of the bolt body. At the rear, a closely fitted shroud blocks any gas from reaching the shooter's face.

The extractor, a 5.6mm (0.220") wide steel hook slotted into the lower right locking lug, is tensioned by a tiny entrapped coil spring. Its narrow claw grips only about one-tenth of the cartridge rim circumference, but an angled foot at the base of the extractor helps draw it inward to

prevent it slipping as it pulls a fired case out of the chamber. A plunger-type ejector recessed into the opposite (left) side of the bolt face at four o'clock works in conjunction with the extractor to eject cases at a 30-degree angle from the ejection port.

Because of limited bolt rotation, the extraction and chambering cam on the Voere LBW is small. Some low-lift bolts are notoriously difficult to raise owing to the steep angle of the cocking cam. Voere partially solved this problem with the LBW sporter by balancing the cocking cam forces about the firing pin axis, so that not only are they balanced radially, but are also shifted forward to the middle of the firing pin.

This thoroughly balanced geometry combined with working parts which are smoothly polished and precisely fitted enable the rifle's powerful mainspring to be cocked without excessive bolt-lift effort. A low bolt turndown of 60 degrees allows enough rotation to overlap the cam bevels and thus centre the

contacting surfaces to furnish optimum bearing efficiency.

The large-diameter tri-lug bolt effectively limits side play, a style made popular by the Weatherby Mark V in the late 1950s. The head of the Voere bolt is relieved on the underside between the bottom lugs to reduce dragging against the uppermost cartridge in the magazine.

A large steel lug, which rides in a close-fitting longitudinal groove along the left side of the bolt body, not only serves to guide the bolt but doubles as the bolt stop. It also controls bolt rotation.

Since the bolt locks into the barrel insert, neither the alloy bolt body nor the receiver are





under any stress from firing.

The receiver top is drilled and tapped for scope mounts. The LBW test gun was provided with a Picatinny rail and Pecar Optics steel rings with locknut, a sturdy, well-designed mount which allows the scope to be removed and replaced in a few seconds.

The trigger has been set near the lightest possible setting to international standards. The trigger on the test rifle has a totally inert, crisp pull consistently breaking at 900g (2lb). It is as good a trigger as you'll find on any sporter.

The Voere's detachable magazine has a steel box and follower with an alloy floorplate. Capacity is three

rounds in standard calibres and two in magnums. It is retained by a pair of spring-loaded catches in the sides of the magazine well, which is an integral part of the receiver. Pressing inward on both catches expels the magazine into your hand under spring pressure.

Being a single column design, cartridges fairly leap off the follower and into the chamber ahead of the bolt. However, the bolt should be worked smartly to impinge the bolt face onto the cartridge head. In other words: slam the bolt closed.

The Voere features the LBW interchangeable barrel system. The changeover is affected by removing the stock and

loosening two large hex-head retaining screws which pinch the split receiver ring around the unthreaded barrel shank. The barrel has an indexing slot.

The barrel in my test gun in .243 Winchester was 610mm (24") long with a diameter of almost 30mm (1.2") at the receiver. It carries that diameter forward for about 35.5mm (1.396") before sloping off for about 25mm (1") over the chamber section before beginning a slow taper to reach 15mm (.6") at the dished muzzle.

A set of ramped steel open sights are fitted. The rear sight has ears and a square notch with a white dot on each side. The front sight is a flat-top post.

ON THIS SPREAD

- Showing details of stock's inletting and recoil lug.
- Action is shown cocked with tail of firing pin protruding from the bolt sleeve making a red-dot indicator visible.
- The two-position safety is in easy reach of your thumb. Note the recess for the bolt handle to turn down into.

Voere LBW had a Pecar Optics 42.5-10x50 scope attached using a Picatinny rail and Pecar Weaver-style rings.



ACCURACY & VELOCITY				
Ammunition (.243 Win)	Bullet (gn)	Velocity (fps)	ES (fps)	Average group (inches)
Winchester Varmint-X	58 PTRE	3850	25	0.685
Buffalo River	70 HPBT	3572	18	0.820
Buffalo River	87 V-Max	3212	23	0.660
Winchester Super-X	95 EP	3100	18	0.729
Browning	97 BXR	3100	16	0.650
Buffalo River	100 SBT	3000	18	0.895

Code: ES, extreme spread; PTRE (Polymer Tip Rapid Expansion); HPBT (Hollow Point Boat Tail); EP (Extreme Point); BXR (Rapid Expansion); SBT (Spitzer Boat Tail). Accuracy results are the average of three 3-shot groups at 100 yards from a Caldwell Lead Sled. Velocities are the average of nine shots recorded with a MagnetoSpeed chronograph.



The barrel is fully freefloating from in front of the receiver ring. There's a fair gap under the barrel at the fore-end tip.

A pair of recoil lugs, made as an integral part of the receiver, sit in a recess in the stock where they abut an alloy recoil stop. The inletting is clean-cut and has the kind of smooth surface usually associated with dense European walnut.

There is no doubt about the ability of the Voere's alloy receiver to support the free-floating barrel without drooping. Its strength lies in the vertical cross-sectional rigidity of the receiver about its centreline and in a plane through its mid-section.

Design wins out despite the lower physical properties of aluminium compared with steel because the Voere's efficient cross-sectional pattern forms an I-beam effect, thus giving its receiver enough rigidity combined with the available bedding surface to resist bending and thus support an entirely free-floating barrel in a rigidly uniform manner.

Spare barrels are available in calibres with .222 head size, .30-06 head size or magnum size. Different cartridges will often demand a different magazine to suit. Swapping to a calibre of a different head size requires a change of bolt head. This is a simple operation, as is disassembling the bolt.

The stock is European walnut with contrasting dark streaks and plenty of grain. The buttstock has a high, straight comb, slightly sloping upwards to the rear, and its generous cheekpiece blends in nicely with the upper line of the pistol grip, which is gently curved and has a palm swell on the right side.

The long, slim fore-end is rounded and comfortable to grasp. Panels of chequering on grip and fore-end look great, with diamonds sharply pointed-up to afford a secure grasp.

Stock furniture consists of a pair of Q/D studs with sling swivels and a solid black recoil pad. The barrelled action is attached to the stock with a pair of hex-head screws, one at each end of the alloy floorplate. What appears to be a through-bolt in the stock is actually a pair of end

covers for the alloy recoil stop. A pair of lugs on the bottom of the receiver abut this stop to absorb heavy recoil.

Weighing 3.3kg (7.25lb) bare, the LBW was field ready at 4.1kg (9lb) with a Pecar Optics Black Carbon 2.5-10x50 scope and full magazine.

Accuracy testing was carried out with six different factory loads. The outfit delivered consistently tight, round groups due in no small part to the light, crisp trigger and very fast locktime of approximately two milliseconds. Accuracy results can be seen in the table.

The Voere LBW is inherently accurate, and the rifle's styling is appealing, making it a handsome gun judged by even the most exacting standards. The hunter or rifleman who wants a rifle with switchbarrel capability that combines modern technology with Old World workmanship and quality will find the Voere LBW well worth investigating.

VOERE STORY

Voetter & Co, in Vohrenback,
West Germany began
manufacturing rifles based on
the Mauser 98 action during the
1950s. By 1967 it was offering a
rifle of its own design called the
Titan, which featured a
multiple-lug bolt and Californiastyle stock; it was sold in the US
under the Kleingunther name.

The Titan was flawed by a number of design shortcomings and changes were needed. It was replaced by an improved Titan II in 1976, which was discontinued in 1978 and replaced in 1982 by a revamped and updated version designated as the Titan III.

Business passed in 1978 to
Tiroler Jagd-undSportwaffenfabrick of Kufstein,
Austria, and continued under
the banner of Voere Austria. In
1987 the company was
purchased by the MauserWerke at Oberndorf and Voere
actions were used in rifles
made and sold under the
Mauser name as the Model 99.

Today, Voere is offering its perfected switch-barrel LBW rifle, which shares some of the design features of the Titan actions.

ON THIS PAGE

Modular receiver has massive proportions, an integral magazine well and split receiver. Removing two hex-head screws allows the barrel to be changed.

6 The large-diameter bolt's body is light aluminium alloy as it is not load-bearing.







Tracking by sight

Swarovski can help you find your way as well as your target.

THERE are few pleasures greater than looking through ultra-clear optics, something you can take for granted if you own a pair of Swarovski EL-series binoculars, but if you're given a host of other useful functions at the same time it's extremely satisfying. That's where Swarovski's EL Range binoculars come into play.

They not only have an inbuilt 10-2000m rangefinder and ballistic calculator, they'll ensure you can easily find downed game or other distant

things with their Tracking Assistant (TA) technology.

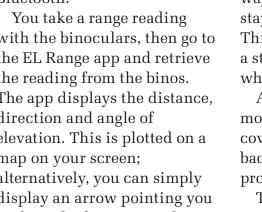
I used it a few times to help get around a hill to my target: I saw goats above me in a spot I knew I wouldn't be able to approach unseen unless I took the long way around, and by using the Tracking Assistant I managed to loop around and come out exactly on top of them. That was a great advantage.

How does it happen? Let's assume you're equipped with your EL Ranges and you've got your mobile phone in hand



with the EL Range app installed, and the two devices are communicating via Bluetooth.

You take a range reading with the binoculars, then go to the EL Range app and retrieve the reading from the binos. The app displays the distance, direction and angle of elevation. This is plotted on a map on your screen; alternatively, you can simply display an arrow pointing you in the right direction and a distance between you and your destination.



The system remembers your starting point and the target location as if they were waypoints in a GPS, so they stay with you for the duration. This make it very easy to plot a stalk or go straight there, whichever suits you.

All this relies on having mobile phone coverage. No coverage, no map. But there's a back-up: The binoculars can provide a simplified version.

They'll remember your start and target points and tell you how far away from them you are, as long as you can take a rangefinder reading back to your starting point. You need a vague understanding of how to triangulate directions to make sense of this, and I'm not going to explain it here, but it works. And if you've got a paper map and know how to use it, it'll work even better.

Given the paucity of mobile coverage in Australia's rural areas, you're best served learning how to use that function. However, when you do have reception, the app is the way to go.



The Tracking **Assistant** system is a valuable aid in the bush, with or without mobile reception."

want to store ballistic data for up to three of your firearms, enabling you to take full advantage of the features of the binoculars. You can input the data from an impressive selection of factory loads or from your own handloaded concoctions. Once you've got it in the app, you can share it with the binoculars, so they can display the ballistic feedback you need to adjust your aim for a ranged target.

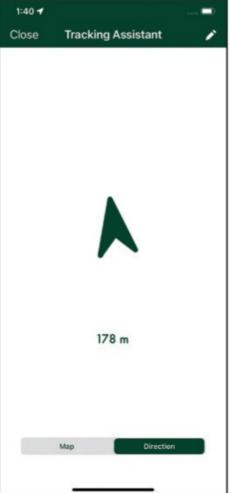
The app will go as far as calculating a maximum recommended distance (MRD) for you, giving you the sight-in height at 100m as well as the zero range. Comparing the results with the data on various ammunition makers' websites, it's spot on.

MRD is another way of looking at what we prefer to call point blank range: it's sighting in your rifle so that the rise and fall of the bullet stays within the kill zone of your target to the maximum possible distance. Nick Harvey expanded on this idea in the September issue.

MRD calculation can be turned on or off as it suits you.

ABOVE: The ranging button is on the right, in the perfect spot, and is one of just two buttons. LEFT: Once you've ranged your target, the app takes you there using your choice of map or simple arrow with distance.











Colour quality and contrast work to bring out the details in what you're looking at."

The whole ballistic system will probably work best if you have one of Swarovski's scopes on your rifle, because they're what's listed in the app; you can select the one you might have mounted on your rifle. I didn't have that luxury but didn't feel handicapped in the least because I knew my own scope well enough.

After all, adjusting for long shots is just a matter of using holdover or clicking the adjusters a little, and once the binos have ranged the target, the app will tell you how much you need.

The app also makes adjustments to your binoculars. You can set the brightness of the internal display, the units of measure (metric or imperial) and other details. You can do



these things inside the binoculars themselves but it's easier with the app.

Swarovski has kept it simple with just two control buttons for the electronics, including the one-press ranging button which is on the top right of the body, where it should be. The good thing about having only two buttons is you always know where they are and can't hit the wrong one. The bad thing is the combinations of short, medium and long presses to memorise, as well as sometimes pushing both buttons at once.

As with all such things, practice makes perfect. It's all easy when you've memorised the main combinations.

Swarovski set up a new way of focussing the lenses to your eyes. Open the manual and it seems difficult but it's not.

The result is spot on. My eyes are far from perfect these days but in quick order I had both the internal display and overall view of the ELs looking sharp as tacks for both eyes (noting that the internal digital display is only in the right barrel).

This brings us back to the central theme. These are binoculars, after all, and there's no point writing about them if we don't discuss the optical performance.

If optical excellence is your priority, Swarovski's NL range may be the way to go but the EL's glass is not far behind and, of course, it's among the best you'll get. To my eyes, there's clear vision right to the edges of the view. The colour quality and contrast work very well to bring out the details in what you're looking at. And looking for.

The field of view is quite wide: 12m across at 100m distance. The 8x42 version of the EL Range will give you a slightly wider view of 14m at 100m, something well worth considering if you're hunting in closer country.

Swarovski has done pretty well to cram everything into the EL Range binoculars without creating a big, heavy device that you wouldn't want to cart around. True, they don't have the beautifully shaped, petite build of the NL Pure binoculars but these 10x42s weigh a respectable 930g or so.

Overall dimensions are 169 x 136 x 79mm, certainly not too big for a chest pouch.

The Swarovskis aren't cheap at \$4990 (\$100 less for the 8x42 set). The law of diminishing returns with optics means you pay incrementally more for ever-smaller improvements in vision. But if you can afford the better image quality, why wouldn't you?

Don't forget that a large portion of the price — roughly a quarter of it — is in the rangefinder and Tracking Assistant technology.

Hunters who see the value in the EL Range binoculars won't be let down. The Tracking Assistant system is a valuable aid in the bush, with or without mobile reception. Added to the binoculars' built-in rangefinding ability, the ballistic feedback, and the excellent optical quality, Tracking Assistant makes the Swarovskis a complete package that many hunters will find very useful.

ON THIS PAGE

The electronics don't add a huge amount of bulk to the binoculars, which you'd call medium sized.

The lenses use the same Swarovision technology as Swarovski's top-shelf NL Pure binoculars.

The EL Ranges come in a well-made padded case.



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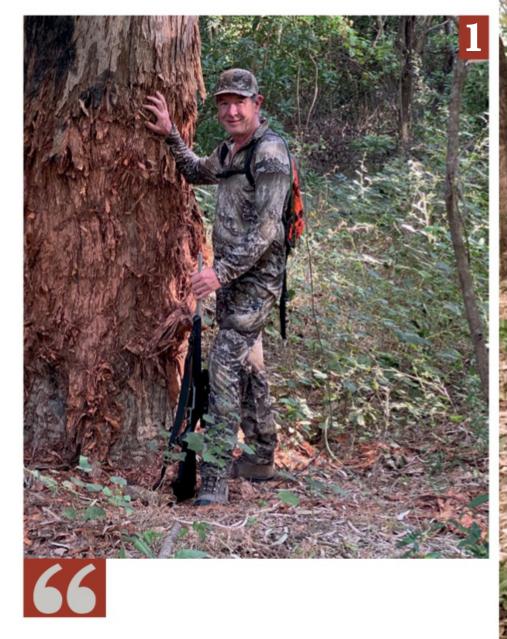
Summer comfort

This lightweight combination from the Ridgeline Performance range keeps you fresh in the heat

YOU work up a sweat trekking around lower Cape York chasing pigs and scrub bulls. Particularly when the idea is to head out on foot to a nearby spot for a look but, when nothing materialises, you decide to keep going. And going.

That's what I did and it turned out to be a fruitless walk, at least as far as game was concerned, but it was an excellent start to my assessment of Ridgeline's lightweight clothing, which I've since worn in the heat and the cold on various hunts. It's been through a good trial and I'm pleased with the outcome.

We're talking about a shirt and pants from the Performance range: the Micro Lite quarter-zip top and the Stealth pants. In this case they're both in the excellent Excape camo pattern but there







are various options, including plain earthy colours.

As we move into the warmer months, they're both an obvious choice for hunters, and that's what this review will focus on, but they've also worked well in the cold, a point I'll expand on shortly.

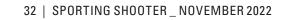
During those first few days near Cooktown, I wore the gear for three days straight without washing it and it was superb at keeping odour to a minimum, living up to its anti-bacterial promise. In fact, even after being bundled into my bag with all my other dirty gear at the end, it didn't pong.

This means you can avoid stinking so badly your prey smells you too easily, and you can carry fewer garments if you're out on a long hunt.

Both pants and shirt wick away sweat and dry quickly, for obvious benefits. The fabric lets the breeze through, which is nice when it's hot.

Despite being a close-fitting cut, they don't stick to you or restrict movement. Shirt and pants stretch, and you hardly notice they're there.

The close fit reduces snagging on brush when







Excape camouflage

Adopted by Ridgeline in 2020, the Excape pattern is primarily a breakup design intended to disguise your human body shape as much as it is to blend you into the background. It is not only made up of large sections of contrasting patterns to disrupt your outline, it has a threedimensional look that seems to add to the effect quite well.

The larger sections are filled with micro-patterns to further hide you, with this effect being more useful up close when you're blending in with the foliage around you.

From what I've experienced so far, animals will have a hard time detecting you if you stay still and help the pattern do its job. It seems to work equally well in heavy timber, more open country and in the lusher terrain up north.

stalking, and the materials are very quiet, both when you're moving and when you're brushing against leaves and things. It all adds up to excellent stalking gear.

With sun protection of SPF40+, you're not going to burn. The neck of the shirt isn't tall enough to reduce the need for a hat, though.

In near-freezing conditions, a set of thermals underneath made the world of difference. even in a chill wind, and of course a jacket helped no end. Ridgeline's Ascent softshell jacket filled that role perfectly.

By layering you can make these Ridgeline garments work in winter, which may suit your budget if you have to make your gear work year-round.

While it's very light material, I haven't yet torn or damaged it despite a fair bit of use so far. No complaints about the quality. It's so light that the top and pants pack up into about as much room as a set of socks and jocks.

There aren't many pockets: two front pockets and one non-billowing thigh pocket in the pants, and nothing at all in the shirt.

You'll pay about \$100 for the pants and \$80 for the Micro Lite long-sleeve top, which seems decent value these days. You'll certainly be getting gear that does the job. This combo of Micro Lite top and Stealth pants is excellent for warm-weather hunting and can be used beyond that with other layers.

It's super-quiet, very comfortable and can be worn over a several days without getting smelly. It definitely gets the thumbs up.

You'll find it in many gun shops and online at ridgelineclothing.com.au.

ON THIS SPREAD

Micro Lite top and Stealth 📕 pants are close-fitting but not cloying. The stretchy material is quiet when stalking.

High-cut neck offers extra sun protection but a brimmed hat is still necessary for the full effect.

3 Anti-bacterial treatment allowed Mick to be an unwashed grub for days without stinking. Much.

WHAT IS AVAXHOME?

AVAXHOME-

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The stove's tops

For brewing up or cooking up, a portable stove is great, even on a day hunt

MOST of us carry a backpack with us out bush. It's standard to expect there to be a water bottle, some snacks, extra ammo and maybe a first aid kit in there. After that, whatever you find in someone's pack can be a highly personal affair.

I tend to carry more than most as I usually have a big camera and a couple of lenses, and I've also started to carry a small stove with me on most adventures. It's been a welcome addition.

It goes without saying that you'd have a stove in your pack for most extended backpacking situations. It is our primary means of boiling water for dehydrated or freeze-dried meals.

There are stacks of options out there, but the canister

stoves have become my favourite. They are usually the fastest to set up and get water boiling, and they're often the simplest. As a gear head, mucking around with a cool gadget is a lot of fun and I enjoyed the convenience of hot water so much on pack hunts that I decided to carry it with me on day hunts, too.

I'm sure many people loathe the idea of putting a stove and fuel canister in their backpack for a day hunt, as we like the idea of being light, fast and mobile. I have to say, though, that a small stove and fuel canister are about the same size and weight as my camera setup. I'm used to carrying too much camera gear so a bit more weight can't hurt, right?

If you've got a good pack with a solid frame, the extra

bit of weight and space isn't an issue.

The act of sitting down to make a coffee with a hunting buddy is almost magical. The social aspect of having a yarn while taking a break forces you to slow down and take in your surroundings. Despite not covering ground when you're having a brew, it's common to

Never underestimate the power of sitting still for 15 minutes."

hear and see more. Never underestimate the power of sitting still for 15 minutes.

Besides coffee, it's a good way to have a warm soup or similar meal as a morale booster on a bitterly cold day when it feels like you're never going to warm up properly. Cold weather is great for hunting in my neck of the woods but if you have a hard time warming up, it's easy to talk yourself off the mountain and back to camp where the camp oven is doing its thing over ironbark coals.

If you haven't carried a stove for your day hunts or have never looked at a portable stove, I encourage you to do it. It's a nice reminder that hunters have relied on fire and heat for thousands of years, and it's good to have them at the tips of our fingers with the click of a button.

Being out bush doesn't always have to be hard work.

Until next time, enjoy living your wilderlife.

Follow Dylan on Instagram at '_wilderlife_'



RIGHT: A compact stove being used to cook a lentil stew.





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Time to get rid of PTAs

Permits to acquire serve no useful purpose but they do choke up the bureaucracy, causing expensive delays. They need to go.

WHEREVER you are in Australia, if you've bought a firearm at some point since 1997 then you'll have needed a permit to acquire (PTA) or your state's equivalent — in other words, you've had to give your state firearms registry money, fill in a form and, for most guns, tell them why you need it, then wait for them to send you the necessary approval (by mail, in some states) before you can collect your new gun.

We've always said PTAs and registration are unnecessary — especially since licensed shooters have jumped through all the hoops to obtain a firearms licence and proven they're a fit and proper person to have firearms.

The problem we are running into now is that the people in charge of issuing PTAs were largely in primary school or not even born when the National Firearms Agreement (NFA) came into effect, and simply don't know anything about guns besides what they've seen in movies and video games. They are given to questioning things unnecessarily (case in point: WA deciding anything larger than 8mm Mauser is a 'Very High Powered Rifle') and so make what should be a tick-and-flick exercise a lot more complicated and timeconsuming than it should be.

We've seen PTA processing times blowing out across the country — and it's just an unnecessary waste of time, money and resources.

We have a very simple solution. Get rid of them.

Under the NFA, shooters are not required to demonstrate a 'genuine need' for a Category A firearm. Simply having a



Permits to acquire: one per gun and for what reason?

gun licence is enough, and 'hunting' or 'competition use' has long been a more than acceptable genuine need for Category B firearms.

PTAs, in other words, simply serve no purpose except to add more bureaucracy to an already over-complicated and punitive system — and put money into the government coffers, of course.

Getting rid of PTAs would be ludicrously simple to implement, too. You go to your local gun shop, find a gun you like, the dealer checks your licence is valid (using a real-time computer system, which already exists) and, if it is, sells you the gun and charges a Firearms Registry Notification processing fee as part of the sale.

You take your new gun home and the dealer forwards a notice of disposal to the Firearms Registry with your details and the details of the gun, and pays the Registry the processing fee that you've already paid. The Registry quickly updates its details, using the electronically provided data from the dealer, and that's the end of it.

By our reckoning, this would cut paperwork at Firearms Registries by more than half.

What really makes this a no-brainer is the fact PTAs are almost never refused anyway, based on the information we have available. In 2018 in Queensland, for example, there were 121 PTAs rejected out of 55,638 lodged. That's a refusal rate of 0.02 percent — statistically insignificant by any metric and proof PTAs simply don't need to exist.

Imagine being able to grab an air-rifle on a whim to deal with cane toads in the back yard, or buy on the spot an interesting rifle that catches your eye when you're in the gun shop getting some ammo. Imagine (if you don't live in Queensland, since they can already do this) simply being able to swap a broken/obsolete gun for a new one, instantly.

This isn't just about red-tape reduction; it would be a huge shot in the arm for gun shops across the country — many of which are struggling because of PTA processing delays and the lack of customers caused by said delays. Recently in Queensland, this has cost the industry millions.

Ideally, we'd love to see an end to firearms registration completely — we all know the registries are inaccurate, wasteful and pointless — but getting rid of PTAs would be an excellent first step with huge benefits for shooters and the government alike.

Graham Park is the president of Shooters Union Australia.



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MEATHERBY/FOCCHI PHOTO COMPETITO



Brendon Benadie didn't have much to say about this photo but it tells a thousand words. He's clearly a happy bloke to have nailed this fox. And those Fiocchi .223s have made short work of it! And that looks like one of the Weatherby Vanguard scoped packages he's got in his hand, surely one of the best buvs around.

"This is a really nice boar I managed to hit up early one morning out at Flinton," says Andrew Collis. "Two degrees on the back of the ute. Was a tad cold! Driving down the laneway I saw this fella running away from me. The car was still moving when I let my shot off, hitting him and stopping him in his tracks. I'm hoping this one's a winner." Andrew, this one's definitely a winner, even against the top-quality opposition this month. Well done.

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"I recently went out to get some venison for an upcoming meeting," says David Wyatt. "My mate Rod and I were after chital as he wanted a skin. We had seen a few without having a shot presented. At 10 o'clock we were driving a buggy along a creek and 350m ahead we saw a red stag — a double-three, not very old, so was decided we would take him. I could almost taste it

"While Rod was putting in a stalk on it some dogs started howling and the stag decided to head for the creek and disappeared. A change of plans. Rod is a great howler and before long had the dogs talking back to him. We changed location and after some more howling this dog came in to 20m. One happy property owner."



Ricky Howell was out near Bourke again for a hunting trip. He caught this boar coming off a newly planted crop paddock and dropped it at around 120 metres.



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





Red missed?

He'd given up on a trophy and turned his attention to buffalo when Riley Braybrook found the stag of a lifetime.

I HAD been out plenty of times during the rut and had seen nothing that was worth a mount, and now the rut was almost over. There was no roaring that I could hear, so it was pretty well done, I thought.

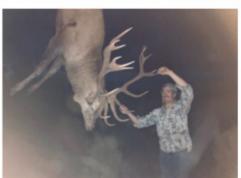
I had bought a new rifle for my up-and-coming buffalo hunt and had some ammo that I was keen to try out. I knew I had a couple of reds running around on the lucern that I could try it on, so I loaded up went out with my opensighted Parker Hale in .458 Win Mag. It was definitely overkill but I wanted to try the new ammo.

Having sneaked down the hill coming onto the lucern flat, I had about 300 metres between me and a red spiker with about seven hinds. I eventually got in to about 50 metres and settled down.

I was about to shoot the spiker when it spooked and ran off. I got out the binos and had a look but it had me stumped because all the hinds were still grazing. Why did he run off?

As I turned back to where he had been, an absolute monster was standing there. That's what had chased him off! I'd never seen anything like it in my life.







How would you cope if something like this appeared while you were armed with an open-sighted buffalo rifle?

Instant shakes. I was saying, "Don't stuff this up!"

It was the wrong gun for it but I knew I may not see him again. I sent a nice package at him. He didn't move a muscle!

I saw a cloud of dust out the back so the first thing I thought was I missed him. I cranked another round into the chamber, stood up and, as he took off into the scrub, shot him on the run.

The shot was too far back for an instant kill and I thought I had just stuffed up shooting the animal of a lifetime. I ran to where he and the others went into the scrub but couldn't find him anywhere.

At this point I was going nuts at myself.

Anyways, after I had settled down from kicking myself for missing, I went back, found his tracks, then saw some bubbled blood. An instant smile! I knew that first shot had got him so followed a bit further and saw the massive prickle bush laying there.

It was the best feeling ever. I will never forget that afternoon.



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GUN LORE

The best pig gun?

An SMLE shortened to a carbine and converted to .30-30 could be the epitome of the pig gun.

THIS Lee Enfield conversion is an alternative to a leveraction .30-30 for pigs with its slick bolt action and 10-shot magazine.

The terrain where you hunt pigs determines the type of hunting you have to do and what calibre and type of rifle you use. You will have little use in lignum country or bushland for a .270 Winchester rifle with a high-magnification scope. Shots in close cover are rarely more than 50 metres and almost never more than 100 metres.

This means you are not handicapped by having a rifle that will deliver 'hunting accuracy' at 100 metres. Any rifle that will land three shots in three inches at that range is entirely adequate.

To be effective, a rifle to be used in brush should be sighted in to hit no more than 1½" high at 100 metres. In most cases this will permit you to shoot and kill a pig by holding dead-on out to about 150 metres.

The rifle chosen for this kind of work is one that can be shouldered fast and aimed quickly. This generally means a short, handy carbine with a barrel length of 455-500mm (18-24"). The most universal type of rifle is a lever-action and one of the most popular cartridges for pig hunting is the .30-30 Winchester. There are plenty of choices in





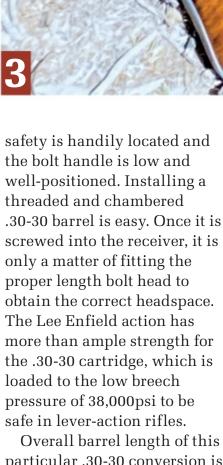


The action is reliable and strong and the bolt is easy to manipulate off the shoulder."

lever-guns, especially when you begin to count all the .30-30 Winchester and Marlin models, then add names like Mossberg, Henry and Rossi.

But even though a boltaction is slower for repeat shots, that shouldn't rule it out. And there's one boltaction that's renowned for its speed of repetition — the enduring Lee Enfield. A friend and gunsmith at CD Field Services recently showed me a 1941 Lithgow SMLE that had been converted into a carbine to shoot the .30-30 cartridge, creating a 10-shot bolt-action pig gun.

The action is reliable and strong and the bolt is easy to manipulate off the shoulder, smoother too, than most military turn-bolt actions. The



Overall barrel length of this particular .30-30 conversion is 520mm; if you exclude the muzzle brake, there's 480mm of rifling. The rifle doesn't really need a brake, but a lot of





shooters are in the habit of carrying their guns muzzle down on the floor of their 4x4 where dirt and grit damages the crown, which has an adverse effect upon accuracy. The brake may not be needed, but it does protect the crown.

The rifle retains the original military buttstock, but the fore-end and wooden handguard are of equal length, which allows the barrel to extend 230mm in front. A barrel band with ex-military sling swivel holds the furniture together and the buttstock has the base for a Q/D swivel.

The action doesn't need any modifications, but the rim

diameter of the .30-30 is .506 inches against .540 inches for the .303 British, which meant the extractor had to be extended slightly in order to get a firm grip on the case rim. A number of other detail modifications were needed to make .30-30 cartridges feed smoothly and reliably from the magazine. The follower was shortened and a block installed in the rear of the magazine to make up for the difference in the overall length of the two cartridges.

The magazine lips at the rear are bent inward to prevent rounds from jumping out. The front lips don't need any work since there's only .001"

difference in diameter of the two cases at the shoulder.

The double-stage military trigger has been altered to a single-stage and consistently breaks at a crisp 1.58kg.

Despite what you may have read to the contrary, the .30-30, although it was introduced in 1895, is as good today as it's ever been. You must remember that about 90 percent of pigs are shot at ranges less than 50 metres, so the .30-30 is plenty adequate. The original load was a 165gn bullet at 1870fps; the powder charge was 30gn of the then-new smokeless powder.

Today's loads are a 150gn bullet at a nominal 2410fps

ON THIS SPREAD

1 Showing the difference in cartridge length (left to right): .30-30 Win, .303 sporting and military, and 7.62x54mm (shortened .303).

A low-power scope with illuminated red dot in the reticle is perfect for this kind of rifle and shooting.

The sporterised Lee Enfield in .30-30 makes a handy pig with plenty of firepower for close- to medium-range work.



LEFT: This boar left his run too late. A 150gn Speer from the SMLE .30-30 quickly caught up with him.

carcass. He spotted me and started trotting away when I mounted the rifle.

As he headed for cover, I swung the crosswires out ahead of his snout and pressed the trigger. There was a solid thump as the bullet hit home and he dropped.

The right scope is invaluable for close-range pig hunting where the majority of shots are taken within 50 metres, often at a moving animal. A scope for this kind of hunting should be of low power for a number of reasons: you don't need magnification; you often have poor light; and the lower the power the more light is transmitted. For this kind of

Speer spitzer and 37gn of W-748 clocked 2390fps and cut the groups by one third.

My only criticism concerned the stock's military buttstock. Its comb is too low for scope use. It really needs replacing with a high-comb buttstock that would give support to the face and raise the eye in line with the scope. A low-cost one like those put out years ago by Fajen and Bishop would correct the problem but, alas, they are no longer being made.

The best solution would be to install a false comb similar to one the military used on Lee Enfield sniper rifles. It fits over the original comb and is retained with two pins. This

and a 170gn at 2220fps, albeit from a 600mm barrel. There is a loss of velocity of around 100fps in a short carbine barrel, and most users prefer the faster 150-grainer. A boar at 50 metres is going to drop just as fast with one as the other. Sighted in for a 150m zero, both loads will shoot to about the same point of impact.

While 150m metres is the practical limit of the .30-30 with most factory ammo, Hornady's LeverEvolution load driving the 160gn FTX bullet at 2400fps extends the effective range by an extra 25 metres to 175 metres.

The Lee Enfield, however, has an advantage over the lever-gun, which suffers from the restrictions that go with having a tubular magazine. The box-magazine Enfield can be reloaded with pointed spitzer bullets to increase its effective range to 200 metres.

The .30-30 is an easy cartridge to reload and although I recommend that

cases be full-length resized, it is not necessary to select bullets having a crimping groove, nor to order a bullet seating die that will crimp case mouths. Mean working pressure in the .30-30 has been established as 38,000psi based on its use in lever-action rifles, but no doubt this could be safely raised to 42,000psi in the Lee Enfield. Increasing the maximum loads listed for lever-actions by 1.5-2 grains of AR2206H or AR2219 should raise 150gn loads to factory level. Higher than this I would not care to go in the rearlocking 1941 SMLE bolt-action.

My testing of the Lee Enfield .30-30 wouldn't have been complete without taking it afield. It was easy to shoot some goats and I got four working the bolt without lowering the rifle from my shoulder. But finding a hog took some doing.

Eventually, early one morning I walked onto a boar dining on a rotting roo

The right scope is invaluable for close-range pig hunting where the majority of shots are taken within 50 metres."

fast shooting, a red-dot reticle is a wise choice because it not only lets you see clearly, when the light is poor the single illuminated aiming point is a big advantage.

For this reason I exchanged the beaten-up Nikko Stirling 3-9x40 that came with the Lee Enfield for a 4x32 AOL Arctic Fox which had a focusing objective and an illuminated reticle. Something like a 1-4x with a red-dot reticle would probably have been better, but the 4x32 worked just fine.

Shot over a benchrest at 100 metres, the Lee Enfield regularly grouped five shots into three inches with Sellier & Bellot 150gn soft-point and Hornady LeverEvolution factory ammo. But my handloads with the 150gn

would make the rifle wellsuited for scope use.

A Lee Enfield .30-30 is an interesting gun with the potential for getting off 10 shots very quickly. It's a roughand-ready outfit that will stand up to the hardest treatment a lot better than a lever-action. You could call it a cockies gun because it will resist the inevitable mild abuse of riding in a farm vehicle.

These SMLE .30-30 conversions are available to order from Bullet & Bits gun shop in Orange, NSW (02 6360 4884). Pricing starts from about \$900 with scope base installed, if you supply the donor SMLE and are content to have a second-hand target barrel installed.



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Tony Pizzata rekindles his hide-tanning skills and shows how easy it is to preserve a skin.

The secrets of a healthy tan

ver years of hunting I've dabbled in home taxidermy but I wasn't artistic enough to do justice to a well-earned trophy, so I gave it away. You don't have to be artistic to tan a pretty deer skin or winter fox pelt, though. To preserve a hide you've harvested as a memento of the hunt only requires you to be patient, have the correct ingredients and follow a few simple steps to achieve a pleasing result.

MAIN: The finished product — tanned skins after using the Leder Commercial Tanning Kit.

DIY SKIN TANNING





I'VE tanned a few skins but my most recent one happened after I'd taken my grandson out for his first fallow deer. Anthony was so excited he asked if he could have the skin tanned as a trophy of the trip. It rekindled my home tanning days of many, many years gone by.

Wow, am I getting that old, I wondered.

After removing the skin to tan for my little hunting buddy, we butchered the deer for meat and headed for home.

To begin, there are many ways you can tan a skin. In fact, in the old days, using the same animal's brains as a tanning paste got the job done. Some people swear by using various types of tree bark. I decided to look into what commercial tanning formulas were available on today's market for the home tanner. I settled on Leder tanning kits, which are available in two sizes from most gun shops Australia-wide.

Leder's Utility Tanning Kit offers enough tanning formula and leather lube to tan approximately 6kg of skin. The larger Leder Commercial Kit contains 2.5 litres of tanning solution and leather lube for bigger jobs of up to about 30 kilos of skins.

Both kits come with a fleshing tool, but the Commercial kit has a slightly better model, in my opinion, as it features dual grips. As I had several skins to tan, including a beautiful winter fox and other hides of my own, I decided to go for the commercial kit to get the job done. I was only going to tan two or three skins per batch to keep the workload down and develop some practice.

The tanning process for furred skins requires four basic steps from start to finish. These include salting, fleshing, tanning and breaking the skin using the supplied leather lube. While Leder offers some basic instructions with the kit, I decided to do a little research online to ensure I'd get the best results possible. The following is how I tackled the task.

Step 1: Salting

After skinning is complete, allow the hide to cool off in the shade, then trim any excess meat or lumps of fat from the skin. Large chunks of meat or fat left on the hide when salting prevent the salt from penetrating the skin, causing hair slip on the fur side.

If the skin has a lot of blood, scrape it off the flesh side and carefully wipe it dry on the fur side. Don't wash it with water as this can cause bacteria to form.

Next, give the flesh side of the skin a liberal coating of salt. A medium-size deer skin will require about 2-3kg of salt initially. Use only flossy or cooking salt, not rock or iodized salt. Ensure you spread the salt evenly and right to the edges, then fold the skin flesh-to-

ON THIS

Trim any excess meat off the skin before salting to allow the salt to penetrate right through the skin.

2 Fleshing the skin after salting to remove the meaty membrane and any fat.

After salting the skins for the second time, pack them away until you're ready to finish the tanning process.

A clean skin ready for tanning.



If the skin has a lot of blood, scrape it off the flesh side and carefully wipe it dry on the fur side. Don't wash it."



flesh, roll it up and store overnight — 12 to 18 hours is about right.

The following day, shake the salt off and allow the skin to drain for an hour or so over a rail to let any juices and fluid drip off it.

Now apply a generous, second coating of salt to the skin right out to the edges and fold it flesh-toflesh, then roll it up and store in a breathable bag or similar. The skin may now remain in storage out of the sun for several weeks in cooler weather, until you're ready to continue. I like to move on to step two, fleshing, within a week or so.

Step 2: Fleshing

Fleshing a skin can be carried out on a bench or over a large log; use your imagination. For this job, I decided to make a proper fleshing beam to lay the skins on. All it took was a few pieces of leftover timber I had lying around and a few screws to hold it together. Then I

rounded the edges with a plane.

When your beam or bench is ready, unroll the skin and shake off the salt, then lay the skin over the beam with the neck at the top. I prefer to work from the neck down, however, it really doesn't matter provided you remove all of the fleshy tissue and any fat.

Work the fleshing knife all the way down the skin until you have fleshed away the excess, then work your way around the edges ensuring the entire skin is clean.

Once fleshing is complete you can wash the skin before tanning. I use dishwashing liquid as it doesn't contain any bleach. Give the skin a good wash, particularly on the fur side, to remove any dirt or blood residue, then rinse it well with clean water and allow it to drain.

Step 3: Tanning

The first thing to determine before tanning is how much tanning solution to mix. This is achieved by







weighing the skin or skins in their wet or damp condition. You don't want them dripping wet, nor dry; they do need to be drip-free with excess water squeezed out. That's when you weigh the skins for that batch of tanning to calculate the amount of water and tanning formula required.

Use a plastic bucket or plastic container, as I'm told the tanning solution may react with some metals. Next, use soft water or rain water as opposed to hard or tap water for the best result.

With all in place, I weighed the wet skins and mixed the correct ratio of water, Leder tanning formula and flossy cooking salt

into a large plastic container. Leder specifies 500mL of its tanning formula to 35 litres of clean water. For this you can add a maximum of seven kilos of skins and two kilos of salt to the solution.

Submerge the skins and ensure there are no air pockets trapped in them as this may cause uneven tanning.

Last but not least, check the skins at least twice a day and move them around in the solution to ensure they are fully submerged and tanning evenly. I took the skins out half way through the week to inspect they were tanning evenly and briefly ran the fleshing knife over each to ensure there was no excess fat or tissue still on them.

Leder specifies 3-10 days for the process, depending on the thickness of the skins. I allowed a full week for my fallow deer skins and they were fully tanned.

The way to check this is by simply making a small nick in the thickest piece of hide, which is generally the neck or the base of the tail. It only needs to be 1-2cm long. Inspect the cut to ensure the full thickness of the skin is blue in colour. If the middle or any part is still white, it's not fully tanned and should be left for a few days longer.

Once you're satisfied the skins are fully tanned, remove them

5Weigh the skins individually to determine the correct amount of tanning formula and leather lube to use.

6 Tony created his homemade fleshing beam from scrap timber he had.

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After tanning is complete, peg the skins to a sheet of plywood and apply the leather lube.

from the tanning bath, squeeze the excess tanning formula out and give the skins a final wash using clean, cold water and washing powder; ensure the powder doesn't contain any type of bleach, as this will discolour the skin.

Finally, hang the skins over a rail to get rid of excess water and prepare to peg them out.

Step 4: Breaking

Now that the skins are fully tanned, again, you'll need to know the weight of each skin so you can calculate the correct amount of leather lube to apply. Too much will result in an oily skin and too little a dry skin, so this step is important.

As I had already made this calculation and written it down when making up the tanning bath, I could move straight on to pegging the skin. For this I used an old sheet of plywood. Before laying the skin hair-side down, I gave each one a brush to ensure it dried with the fur running neatly in one

Submerge the skins and ensure there are no air pockets trapped in them as this may cause uneven tanning."

direction, then carefully turned it over to peg out.

To peg the skin I used a springloaded staple gun, but small nails will also do the job. Try to ensure you peg the skin out evenly to enable a natural shape once dry. As there were a few small holes in the skins, I also gave them a quick stitch up using the wife's sewing kit, but we won't tell her that. Stitching holes while the skin is still wet will create an almost unnoticeable finish once dry.

With the skins pegged out, it was time to apply the leather lube. Leder recommends 120mL of leather lube per kilo of skin weight. So if your skin weighs 4kg you require 480mL of leather lube for that skin.

Standing the boards up, I applied the calculated amount of lube to each of the skins with a paint brush and allowed them to begin the drying process.

Once the skins were about 90 percent dry I removed them from the boards and broke the skins to make them soft and pliable. This is achieved by simply running the bladed side of the Leder fleshing knife across the flesh side of the skin in every direction until the hide becomes pliable.

When that's complete, trim the sides for an even look or whatever shape you desire.

To finish off my skins, I decided to give them a light sanding to remove any burrs or rough spots and I was pleased with the results. Needless to say, so was Anthony.







I HAD to think fast. Camera or rifle? Rifle! Doe or buck? Buck!

They veered slightly to my right as they entered my patch of trees and Sifton bush. I tracked the buck in the scope, catching glimpses between bushes until he stopped, completely hidden except for one antler. I stepped a pace to the right, saw his head and neck exposed and put my finger on the trigger.

Cruz was gunna hate me for this! This was Cruz's buck. This whole three-day camping and hunting expedition was mostly about Cruz shooting his first buck.

This place was full of deer as well as pigs, rabbits, hares, foxes and a few goats. Open paddocks adjoined large blocks of forest. Sandstone bluffs full of caves provided shelter to all kinds of critters; the previous owners of the place had even discovered a

bushranger's diary stashed in one. There was no shortage of water, either. It was hunting paradise.

We'd come in before dawn on our first day and stalked the edges as the light increased. The fallow rut had been progressing fitfully for a few weeks but we heard little and saw less. One buck croaked a bit, not far from where we'd started.

That first day we walked, stalked and scouted for more than 10km, finding sign and gathering information about the area. But everything was quiet. We bumped nothing. Even as evening fell to night we had no joy.

That was OK, though. Cruz had his thermal spotter so after dinner in camp we went looking for pigs, only to face the same lack of success. There should have been dozens of them but either they'd taken the night off or the long grass in the

paddocks was hiding them too well.

"Let's shoot bunnies on the ploughed paddock," I suggested. Cruz grabbed his Lithgow .223 and me my Howa .22 and off we went. Things began to look up, with rabbits and hares everywhere. We used the thermal to find them and the scope-mounted lights (Cruz had his tri-colour Z-Vision light while I was just using a bright white one) to shoot them.

Cruz spotted and I spread lead all over that paddock without hitting a bloody thing! This was not good. First we see nothing and now, when we do see things, I can't hit 'em.

Eventually I nailed a couple. When a fox arrived, I whistled it in and Cruz shot it with the .223. Well, we thought he'd shot it but it ran away. Strewth! Was nothing going to go right on this hunt?

He redeemed himself by decking





some distant rabbits and hares. Paddock cleared, we headed to the top of a bald hill to scan with the thermal and finally found a buck! It was resting in an island of trees about 300m below us and was an easy target but we had promised not to shoot deer under lights. We were hunting, not culling, and spotlighting deer isn't sport.

There were still no pigs so we went back to camp with a plan for the next day.

We would start before dawn. Cruz would stay put at the end of a long spine of sandstone, near where we'd heard the croaking. I'd begin at the other end of the spine and push deer towards him.

When we did it, it didn't work. There were no deer to push. To rub salt into it, I flushed out a fox that I knew I could shoot because it'd only help get the deer moving, but I missed the clear, clean broadside shot from only 30 metres. After my appalling shooting last night, this did my confidence no favours. I swore. I called myself all sorts of horrible things. I stomped and stamped and decided this whole bloody trip was pointless. Shoulda stayed home and done chores.

Despite this, we tried a similar tactic that afternoon in a 110-hectare block of forest. I had heard a single croak and a couple of doe barks in there while failing as a fox hunter. Cruz approached from downwind on the southern end while I went north to have the wind at my back. With any luck, my scent and movement would







flush out the deer, which would head straight into Cruz's sights.

Well, turned out he didn't need me. He found several does and a couple of bucks almost immediately and spent the next couple of hours stalking them as they moved deeper in the forest.

"I had a couple of opportunities to shoot the better of the stags," he said later.

"Bucks," I said.

"But I wanted to wait for the perfect shot," he said. "The stags were annoying the does, who kept moving around. The does would move on and the stags would follow.

"They're bucks," I said, hoping I was annoying him, but he continued without pause.

"I decided to go around past them and see if I could get them when they got into that bit of pine forest where all the beds are," he said. We'd found that place while

scouting. "I found them there, got in pretty close and ended up in a staring contest with this doe."

Cruz was wearing a gaudy pair of sunnies with big greeny-blue reflective lenses. Staying still, dressed in camo, I reckon the doe had no idea what he was, and he was revealing no close-set predator eyes to alarm her too much. Maybe she thought he was the biggest, weirdest looking bug she'd ever clapped eyes on.

The stare-off went for many, many long minutes and suddenly the wind hit the back of Cruz's head. The doe caught his scent and took off, her friends following her lead. Cruz raised the Marlin, latched into the good buck and fired but missed as it ran away.

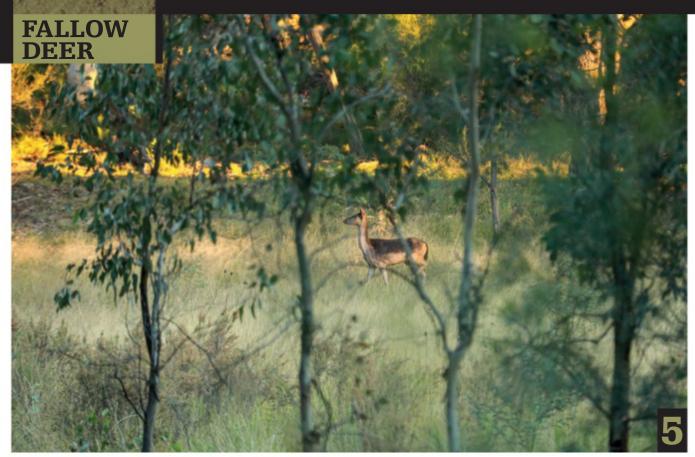
By then, I'd crossed the whole forest's northern boundary, slipped down the western side and settled myself near a dam in a narrow

A full moon rises over the camp as the boys watch the bush telly.

2Dawn, day one, and Cruz looks around as we get the lay of the land.

Mick's buck: No trophy but he was in good nick and worth the shot — even if it was meant to be Cruz's!

4 Mick field-dresses the yearling. Mouth watering stuff!





ON THIS

5This doe is on high alert, looking to where Cruz is stalking in the opposite direction. They're not silly, these deer!

6 Moving slowly and looking constantly, Cruz searches for fallow.

clearing. It seemed like the ideal time and place for a snooze, which would probably be about the most productive thing I'd achieve all day.

The boom of Cruz's .30-30 ruined that idea. It came from only a few hundred metres away and I hoped he'd hit his target. I waited a few minutes then decided to go and find out.

I'd just shouldered my pack when three does and one buck burst from the trees, crossed the clearing and stopped just 30 away from me, which is how I came to be aiming at the buck's neck, knowing Cruz would hate me if I pulled the trigger. I hadn't flushed anything to him, he'd flushed them to me. Like I said, that's not how the plan was meant to work!

Oh well.

This time I didn't screw up the shot. The .308 projectile zapped through the narrow gap in the bushes and hit the buck's neck exactly where it was intended. The animal went down, dead before it landed. I watched the does streak

away, then walked out into the clearing and yelled into the forest.

"Thank you!"

"Bastard," mumbled Cruz. He joined me a few minutes later.

I may have felt a little guilty but not much. This wasn't even a trophy buck, just a young one showing limited potential. Still, it was my first in quite some time, it was vindication after my poor form earlier in the hunt, and it was not going to waste. We field-dressed it and walked out.

"It was teamwork," said Cruz. Yep, true, but the fullback had scored the goal.

We had another spot in mind for an evening hunt but on the way there we intercepted the small mob of goats that the property owners wanted gone. We hooked in, Cruz getting good effect from the quickness of the lever-gun and the instinctiveness of the Aimpoint, and me proving myself back in form again with some good hits from the Ruger Gunsite Scout. We dropped a lot of goats and only four got away.

Culling goats is not in the least bit like deer stalking, that's for sure!

Unfortunately, it made us late for our deer hunt, which was to be an ambush in a well-used corridor. We arrived in time to see three does flee with their attendant buck. Damn it!

Cruz was getting depressed. He had nothing to show for all his efforts and tomorrow morning was departure time.

He set himself up at our ambush point well before the dawn. I walked into the forest a kilometre away so

I could walk into the corridor and spook deer — hopefully sending them to him. As the light came up I found a small mob hidden in tall Sifton on the edge of the tree line, a buck among them. I let them see me and they headed in the right direction; I followed.

They didn't get close to Cruz before a lone buck wandered into his view. Cruz watched as it crossed the short open space in front of him, calmly following a well-worth path. As it passed behind a broad stringybark just 10m from Cruz, he raised his rifle. The movement caught the buck's attention as it came out from behind the tree and it paused to look.

Cruz put a bullet into its shoulder, dropping it instantly.

A few moments after I heard his shot, a yearling stopped on the hill next to me. No way was I letting this tasty fella get away. I quickly raised the Ruger and killed him, then went to see how Cruz had done.

When I got there I knew we had two good pelts for tanning and a heap of excellent meat. Cruz was stoked, with a huge grin and a glint in his eyes. The buck was a young one with a single antler, and that antler was poor. But it was a buck. It was success. It was his first. And the plan had, at last, worked for him.



Driving deer

Flushing or driving deer through forest is a good tactic that works well. It's harder with just two people than it is with 10 or 20, but even a couple of hunters moving around in different parts of a forest can stir up the deer, increasing the chances of crossing paths with them.

The deer will often flee the bush, cross open ground and enter another patch of cover. If that's likely, it's a good idea to place shooters at strategic points on the edge of the trees.

This sort of driven deer hunting is common in Europe but it's rare in Australia.





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Riding shotgun

Leon Wright made the most of duck season despite low bag limits, and added quail and foxes to the tally.

ictorian duck hunters had been cheated yet again, I realised. Cautiously stealing a look over the dam bank, I saw ducks everywhere. And here we were with a seriously reduced bag limit. There were close to 60 ducks all up, and on a dam with a 25-metre diameter they didn't leave much clear water between them.

MAIN: Leon, Missy and Cobber after a quiet hunt on the farm one afternoon.





MIXED BAG: FEATHERS AND FUR

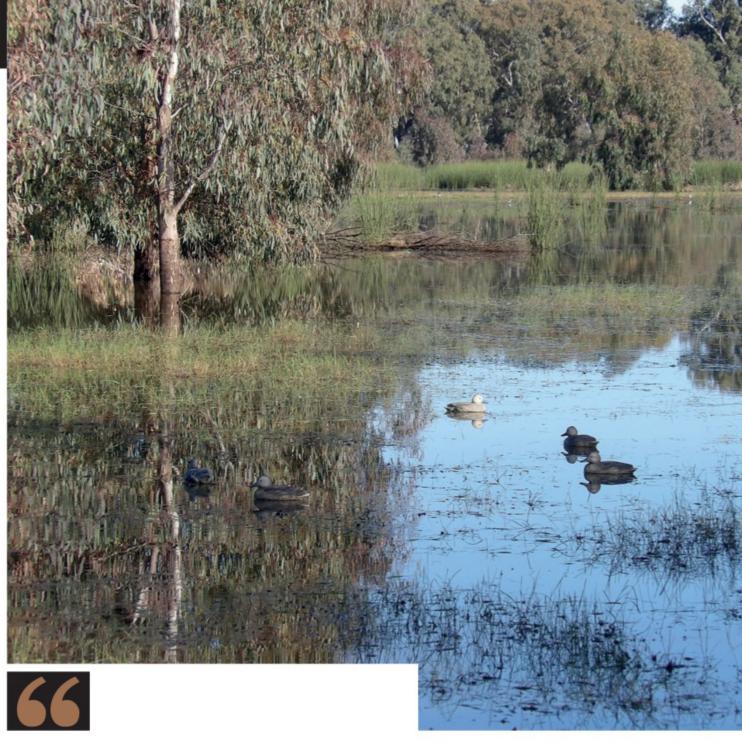
IT WAS a mixed mob of woodies and black ducks, with a few teal, sitting nervously on the water as well as lining the banks of the dam.

Ducks are extremely wary game birds and have an uncanny sense of danger. These ones were well and truly onto us. Signalling to my hunting mate, Blake, I closed my shotgun, slipped off the safety and stood up. Every duck in the state must be on this dam, I thought to myself as they went up in unison.

Selecting a big blackie on the edge of the rising mob, I gave it a bit of lead and fired. Caught square in the middle of the shot pattern, it folded up and dropped back onto the water.

Blake was successful as well and my curly was raring to go, so I sent him on his way with a simple, "Fetch, Cobber." I couldn't help laughing as I watched Cobber retrieve both downed ducks at once, the blackie and a teal. He certainly had a mouthful as he came trotting up to hand over his charges. Unknowingly, Blake had put down a woodie as well, as it is quite hard to single out a lone bird in such a big, grouped-up mob, even if you pick a bird on the edge of it.

We drew a blank on the next couple of dams, probably because they were too close to the busy tracks of the active farm. This was borne out when we looked over a



Every duck in the state must be on this dam, I thought to myself as they went up in unison."



distant dam with the binoculars, where a dozen or so blackies sat in the middle with a number of woodies lining the bank. Set quite aways back in the paddock, it would require a bit of leg work to put us in a position to take a shot.

Fifteen minutes later we were behind the steep dam wall, expecting to flush around 20 ducks, but we were taken by surprise when the air was filled with rising ducks. Dozens of them. Preferring a big fat black duck to a wood duck any day, I quickly swung onto one that was away from the tightly packed ducks, missed with the first shot but scored with the second. Blake had similar luck.

We jumped a few more dams and were soon bagged out, not that that was any great challenge. It took longer to drive out to the farm than it took to bag four ducks each. I planned on overcoming this by going out more often. Living in regional Victoria, with access to numerous properties, I intended making the most of this season.

There didn't seem to be any reasoning behind the four-ducks-aday bag limit. I feel for the city-based duck hunters who can only get away for a couple of hunts a season. It certainly doesn't take much to shoot four ducks.

As for the reasoning behind opening the season on a Wednesday, well, we won't go down that path.

Two can play at this game, I thought to myself. If I can only take four ducks a day, I will simply go out more often.

So the next morning my two brothers and I were standing at the tail end of a horseshoe billabong, discussing how we were going to hunt it. Mick would walk around the right side, flushing and





Grandson William was taken by surprise when Pa shot a fox virtually at their feet. It had been hiding in the stubble.

Every now and then Leon found time to spend a few hours hunting over a block of his decoys.

Another day, another hunt. Leon and Missy with their bag of ducks.

A nice feed of 4quail taken during an early season hunt.

shooting the ducks as they went up. Greg and I would wait in strategic spots along the left side in readiness to take whatever Mick missed.

I'd only just reached the scant cover of a rather sick-looking sapling when two shots rang out and on cue a nice mob of a dozen blackies came weaving through the saplings in the billabong. Well within range, I managed to take a nice blackie and a short time later a grey teal that decide to run the gauntlet. Both brothers had scored a couple each.

Adding the ducks we took on another horseshoe billabong named Wattle Island, we were finished yet again.

"What's on tomorrow?" asked $\,$ one of my brothers. I said I'd give the ducks a go again but seeing that quail season opened tomorrow I'd target them as well. Blake and I had been spotlighting foxes the night before and found that foxes were light on the ground but not the quail. As we drove through the



stubble paddocks a continuous stream of them rose in front of the vehicle — numbers we had not experienced for years.

In the morning, Blake and I parked the 4x4 inside the gateway to the stubble paddock. It was going to be a hot day and we planned to stay just long enough to gauge the number of quail, then be back when it was cooler. With a stiff wind blowing in our faces, we walked through the stubble. With all the second-grade grain lying around I could see why the quail were about. The loose grain, thick stubble and plenty of what we call tomato weed made it a haven for the quail. It wasn't long before we were among them.

The quail I kicked out rose with a rattle of wings and were quick to take advantage of the stiff breeze in their bid to get underway. Taken by

MIXED BAG: FEATHERS AND FUR

surprise by the quail making the most of the breeze I was way behind with both shots. Blake fared better, and we had the first of a healthy number of quail in the bag.

We did a couple of laps of the paddock before the heat of the day brought our hunt to an end. There were still a few weeks to take full advantage of the quail numbers before the farmer burnt the stubble off and we would definitely be back with the dogs in tow.

Being the start of the school holidays, grandson William joined me for a mixture of duck, quail and fox hunting. On our first morning's hunt we parked the ute beside a large haystack and, after reaching for the binoculars, we could see the dam in the paddock was holding a healthy number of black and wood ducks. Eager to get among them, William was quite happy to walk the half kilometre required to get behind the dam wall, on the other side of the dam, and so with William and Missy the curly in tow we were off.

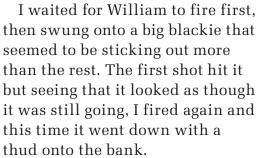
The ducks were out of sight while we covered the distance so it was pleasing to hear the wood ducks chattering away when we finally reached the dam wall. Signalling Missy to sit 20 metres from the dam, William and I continued on and as we walked up the dam bank the ducks were quick to get under way.



ON THIS

Nephew Sean with the party's nice bag of ducks taken during a family outing.

A valuable asset to any duck hunting outfit is a good retrieving dog. Cobber enjoys going out after ducks as much as Leon does.



Like past hunts this season, it was over fairly quickly. We made plans for a fox and duck hunt the following morning. Lately, I had been doing really well on the foxes and I seldom returned home without collaring at least one.

The next morning was perfect for fox hunting — clear blue skies with a gentle breeze blowing. William would be doing the shooting with the Beretta 20-gauge loaded with No 3 cartridges. We were prepared to do battle with the foxes.

It is hard keeping kids sitting still and William's fidgeting warned the first fox as it came barrelling in. It quickly changed course and bolted. The next couple of stands proved fruitless and I could see William was getting a bit disheartened with the fox hunting so I thought one more stand and we would change tactics and head off after ducks.

As is usually the case when your guard is down, something eventuates. At our next and last stand William hollered out as a fox had come in on his blind side and almost ended up in his lap. The

A continuous stream of quail rose in front of the vehicle—numbers we had not experienced for years."

resulting shot gave the departing fox reason to look for safer pastures.

With the disastrous fox hunt a fading memory, William and I were out after quail again the following morning. This time I was doing the shooting while William and Cobber searched the stubble for quail.

For some reason they were a bit light on the ground and with only a few in the bag I finally spotted the reason: a fox crouching in the stubble, virtually at our feet.

Even No 9 shot at close range will do the job and a quick shot was all it needed.

"What are you shooting at, Pa?" asked William.

Pointing at the dead fox, I told him, "In this hunting game, mate, always be ready for the unexpected and make the most of all your opportunities, no matter how meagre they seem."



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SPECIES GUIDE: SAMBAR DEER

Ghosts of the forest

Renowned as the most challenging of all game to hunt in Australia, sambar are amazing animals. Jared Matthews tells why.

am completely addicted to hunting what I consider to be our hardest game species to pursue.

SAMBAR deer were first introduced from Sri Lanka, when a small number came from Sumatra in the early 1860s. The first releases were in what's now Kinglake National Park and at Harewood, near Tooradin. Later releases were northwest of Ballarat at Ercildoune, at Wilsons Promontory and on French Island in Westernport Bay. There was another release on the Cobourg Peninsula, up in the Northern Territory, where they are still to this day.

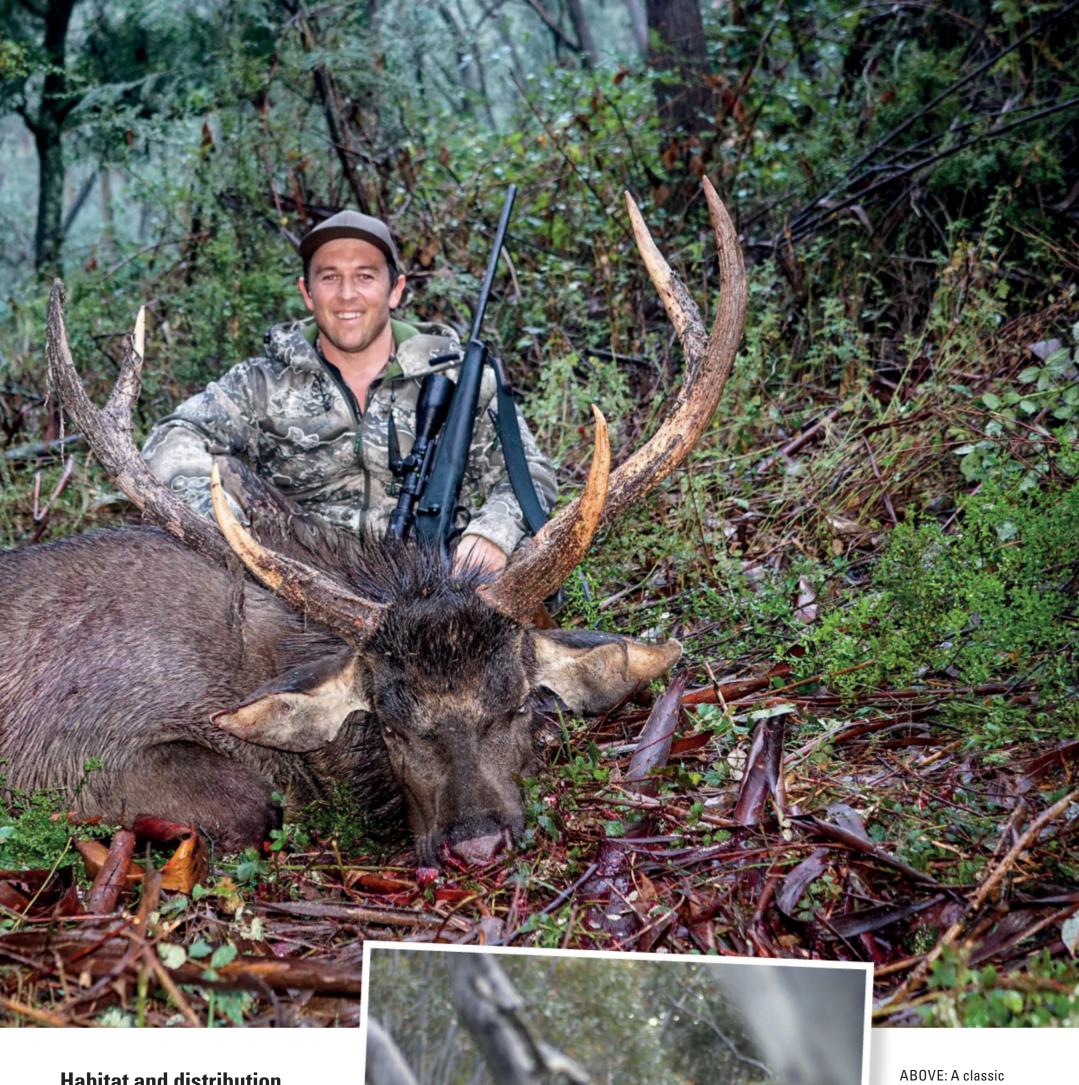
Sambar (*Rusa unicolor*, previously known as *Cervus unicolor*) are the largest of the six Australian deer species and the third largest of all deer species in the world. Stags can stand up to 160cm tall at the shoulder and weigh 300-350kg. Hinds are a little smaller and can grow to about 115cm and weigh in the vicinity of 200-250kg.

Sambar deer are light brown with a ginger-coloured rear. The underparts are a paler cream

colour. Mature stags become very dark brown, almost black in the face. They have short, coarse, hollow hair similar to that of a rusa deer; it makes them rather unappealing as a floor rug in the living room.

Sambar stag antlers generally grow with a total of six points — a pair of brow tines, inners and outers. They'll reach lengths of around 35 inches on large, mature stags but most commonly grow to around 30 inches.





Habitat and distribution

Sambar like to live in thick, dense scrub where they can feed out onto open country in the right conditions and at night. Quite often farm fringe or high alpine tussock country leads to their demise, leaving them exposed to danger, especially during antler growth or post-rut periods when they are chasing optimum feed.

Wildfire over the past decade has made sambar numbers explode for a few reasons; the feed in these

trophy-class sambar stag, something that's often a once-in-alifetime achievement for even the most dedicated hunters.

INSET: With outstanding sight, hearing and smell, sambar will spring you more often than you'll get the drop on them.

SPECIES GUIDE: SAMBAR DEER

regrowth areas is generally premium while the country becomes impossible to hunt in, making the perfect nursery for them to grow in numbers.

Sambar were introduced mainly in Victoria but they have now made their way well into New South Wales with some sightings in Queensland. Although they were introduced in Coburg Peninsula, NT, some people have reported them in other areas of the Territory.

The beauty of these animals is that they can adapt to any given pressure rather quickly, making it a real task to control them or stop their distribution.

Since it has become legal for wild deer to be used as pet food, the cullers have noticed an increase in difficulty of filling their quotas as the sambar have worked out the indicators of a culler in the vicinity. Some have now resorted to battery operated bikes, thermals and using rubber chains on the gates to prevent spooking the deer before getting to the paddocks.

Sambar sign

Sambar sign is much the same as other hollow haired deer species. They wallow in mud, preach and rub trees with their antlers.

When looking at prints to try to locate a stag, I look for a large, deep print with a squared off footprint. Stags will generally paw at the ground over the years, which in most cases squares off their toe, unlike the hinds. This is not always the case, especially in sandy environments where their feet get quite long and malformed.

Checking to see if a print is fresh, I will push down on the ground next to it to see the similarities to try to determine its age.

When looking for stag scat I generally seek a clumpy, stuck-together pile. I am not sure why the stags do this but I put it down to them having a different pallet to the hinds and eating different things.

It is generally easy to judge how much use a sambar wallow has had and whether it is being used by the colour of the water and the prints surrounding it. Different areas will



have more action at different times of the year, but a wallow is always used as a social point by both stags and hinds throughout the year.

I often keep an eye out while stalking to see if there is any mud on the game trails. This will often lead you straight to a wallow.

There are many theories about rub trees. Hunters believe that bigger trees equal bigger stags, but I haven't found that to be the case at all. Every now and then in the Victorian high country you will see what we call a native cherry tree, and these are most definitely sambar stags' favourite trees to rub. It's a miracle to find one that hasn't been ringbarked by a passing stag.

Season

There is no set hunting season for sambar but there are some things to keep in mind. Alpine National Park is closed to hunting between 15 December and 15 February due to the higher numbers of tourists in these areas. Victoria also has seasonal road closures spanning from the June King's birthday weekend through to November's Melbourne Cup weekend, to protect both the tracks and the people using them at risky times of the year.

Sambar breeding occurs throughout the year. It's not uncommon to see stags at any point of antler growth, or a new fawn at the toe of a hind, any time of the year. However, for most parts many sambar hunters would agree September-October is when most are 'rutting', so to speak, giving you the best chance to find a stag letting his guard down.

Hunting methods

Stalking consists of finding fresh sign and following it up, slowly making your way along game trails to points of interest or cutting gullies as the deer move up to bed. This requires lots of patience, slowly walking and glassing into the bush for deer. As the saying goes, walk a little, look a lot.

Hound hunting is by far the best way to control deer numbers; it's very effective. A hound crew can consist of up to 10 houndsmen and five hounds, not counting those in training. The houndsmen will find

ON THIS SPREAD

A spiker. Note the coarse, dark hair, which doesn't make a good rug.

An excellent trophy in velvet. With no regular season, sambar may be found like this at any time of year.



fresh sign and put the dogs on it. The hounds will follow up the deer to either bail them up or allow a hunter to get in front of them to take a shot when one presents.

Spot-and-stalk is where you generally sit and wait in semiopen country, glassing with binoculars. Once you find a target animal you can stalk in and take it. This can be very productive in high Alpine country or on farm fringe country.

Tools of the trade

It really depends on your method of hunting but the minimum legal rifle calibre for sambar in Victoria is .270 (6.85mm). The minimum draw weight using a bow is 50 pounds and the arrow must be fitted with a broadhead that produces a combined arrow weight of 400 grains.

Other than for hound hunting, a pair of binoculars is a must-have. I like either eight- or 10-power, personally, depending on how thick the scrub is. If you are hunting with a spot-and-stalk method, I would recommend a spotting scope or a set of 15-power binoculars on a tripod.

Hunting advice

If there is one thing I have learnt about sambar, it would be that not one area is the same as the next. They do different things in different places and many people have different opinions of what's right and wrong. I can only give you my explanation and pass on my experience.

I like to hunt sambar mostly in the warmer months. I find them much more predictable than in the cooler months. With hot days come shorter nights, reducing their feed time, so they will be on the move earlier of an afternoon and most likely looking for water first, then feed. In spring they are chasing that good feed that grows in the open, like in the Alpine country, which draws them out of the thick, dense scrub and increases the chances of seeing them tenfold.

Sambar have incredible hearing, an amazing sense of smell and killer eyesight like no other deer you will have the pleasure of hunting. It is important when stalking to keep all the variables in your favour; monitoring the wind direction, rising thermals in

Sambar can adapt to any given pressure rather quickly, making it a real task to control them.

the morning and dropping in the evening.

Sambar stags will often feed up to a bedding position shortly after daybreak. In most cases this will be around three quarters of the way up the gully, giving them several escape routes when in danger. In the afternoon they feed down to gully floors or feeding areas.

Mature stags are always in an area for a reason. It will have good cover, feed, water and the minerals they rely on for antler growth. In saying this, if a stag is removed from its area, another will replace it for the same reasons.

Personally, I won't shoot hinds in an area I hope to harvest a trophy stag. I believe if there is a healthy population of hinds, a stag has more reason to hang around; more stags have a reason to move in.

Enjoy the journey of learning about hunting this incredible deer species.



Spika Bruzer gumboots

This year's hunting season was a washout for many of us, as heavy rain and flooding took its toll in many parts of rural Australia. That's when I decided to invest in a pair of Spika Bruzer gumboots to combat the constant ankle-deep water in low-lying areas of the bush. Unlike a pair of traditional gumboots, Spika Bruzers fit better, featuring a neoprene upper that allows for better movement when walking.

The lower section of the Bruzers is 100 percent waterproof rubber and it fits like a glove, so to speak. With their perspiration-absorbing insole for added comfort, they are definitely more than just gumboots. In fact, I found the inner soles also acted as a shock absorber when walking, offering comfort and moulding them to my feet — not to mention making them a lot warmer to wear in cold weather conditions.

The upper is constructed of 5mm neoprene, which is a lot softer than rubber and hence offers freedom of movement when walking. In the past, I found rubber gumboots tended to chafe my shins, unlike the neoprene uppers on these gumboots.

Additionally, they are cut a little lower on the front to allow comfortable movement when walking. Similar to what you'd expect in a wetsuit, neoprene is not only waterproof but warm, so you'll find they are quite cosy to wear. Being stretchy, the neoprene makes the Bruzers very easy to remove.

In fact, the back of the neoprene upper features a grab-n-go grip for ease when putting them on. Another smart addition to the Bruzer gumboot is a heel stud on the back that allows you to remove your boots without having to grab them with both hands and struggle to reef them off.

The sole of each boot features a deep tread for non-slip walking in muddy conditions.

While the Spika Bruzer gumboots are not designed for very long distance walks, nor mountain hiking, they are excellent value in wet weather conditions or for simply tramping through thick bush or long grass, and on frosty, wet mornings.

Bruzer gumboots are available in men's, women's and kids' sizes and feature Biarri camo neoprene uppers.

Ask to see them at your local Spika apparel outlet or visit www. spika.com.au for more details.





SportDOG Rechargeable Dog Fence

SportDOG offers a range of products to train, contain and keep your dog safe.

One such product is the SportDOG Rechargeable Dog Fence (SDF-100C-22). The setup creates a boundary around your home or a specific area to keep your dog in, and also works to protect areas such as a garden bed that you wish to contain or protect.

The kit includes 300 metres of wire, 100 boundary wire flags, a rechargeable receiver collar and a transmitter you can mount in your home. For farmers, you can contain up to 100 acres with additional boundary kits.

The way this system works is your dog's

receiver collar communicates with the radio signal emitted from the wire. When your dog approaches the wire zone, the collar delivers audible warning tones. If the dog ignores the tones and proceeds towards the boundary the collar will deliver a stimulus warning to remind the dog to retreat into the safe zone.

The collar offers four levels of static stimulation, from low to high, to match any dog's temperament. You can use additional receiver collars if you have more than one dog.

For more information or to purchase online visit www.barkcontrol.com.au or phone 1300 668 931.

CALDWELL





CALDWELL TACK DRIVER X BAG FILLED
CALD-TDXBAG



CALDWELL TACK DRIVER X BAG MINI FILLED
CALD-TDXBAGM



CALDWELL DEADSHOT REST COMBO UNFILLED
CALD-DSRC



CALDWELL TACK DRIVER BAG FILLED
CALD-TDBAG



Horus Vision

Horus Vision is well known in the USA, particularly by long-range shooters and hunters, for its advanced reticle systems and quality optics. Horus's very popular line of HoVR precision shooting products has recently been made available to the Australian shooting market and is now distributed by the Lightforce Group.

The Horus HoVR line includes the 5-20x50 FFP rifle scope, 1.0 BT 2000 laser rangefinder, and the 1.0 Weather Meter. The system works in conjunction with the free Horus Ballistics app to give new and advanced shooters everything they need for precision shooting.

The HoVR 5-20x50 FFP rifle scope is available with a choice of three different Horus reticles: the well-regarded TREMOR3, the competition-ready TREMOR5, and the H59-MOA. All of these reticles utilise the patented Horus Grid and other features that make them ideal for all precision and long-range shooting.

Keep an eye out in an up and coming issue of *Sporting Shooter* magazine and www.sportingshooter.com.au for a full review on the HoVR range by Horus Vision.

In the meantime, for more information on Horus Vision products or to find a local dealer in Australia please visit horusvision.com.au and select the dealer locator.

For trade enquiries contact sales@lightforce.com or phone 1800 030 308.

Plano Shooter's Case with gun rest

Plano offers a range of all-weather bow, gun and pistol cases that are rugged, watertight and dust proof. In addition, it also offers a series of ammo boxes, field boxes and the Shooter's Case, which comes with a sealable lid and carry handle, making it ideal for home or range use.

Designed with enough room to keep most of your essential cleaning gear and gunsmithing tools together, it also features a lift-out tray and yoke system that attaches to the case to hold your rifle for cleaning. Offering deep storage, its external dimensions are 55.8cm x 36.2cm x 29.2cm.

Plano also offers a similar Deluxe Shooter's Case in camo that has the staggered yoke system to hold your firearm. In addition, this case has two lift-out trays with plenty of room for other gear. Exterior dimensions for the Deluxe case are 45.7cm x 22.8cm x 34.3cm.

See the full range of Plano cases at your local gun shop or for more information visit www.nioa.com.au.



SmartRest tripods, cradles and rests



Eagleye Hunting Gear offers a large range of shooting aids designed to enhance your shooting ability, whether spotlighting from a vehicle, shooting off a quad bike or hunting on foot. Eagleye's products for use at the range or in the field, like its selection of SmartRest bipods, tripods and accessories, are unique.

Many of the products are designed to interchange, making them very versatile and user friendly.

The SmartRest Tripod and Cradle offers a very stable platform with rock-steady support, while a ball-head mount on the tripod allows the cradle to pivot 360 degrees in any direction. In addition, the cradle is fully adjustable to accommodate a variety of firearm lengths and to maximise your firearm's balance while on the cradle.

Also available are optional rests, struts and even a fully

adjustable gun clamp that comes with a rail attachment to fit to your SmartRest Tripod ball-head and clamp. The SmartRest tripod and ball-head combo is available in the choice of tall or short versions, so all options are covered.

Another excellent product is the HyperPod II that combines a single shooting stick that's fully adjustable for height, whether sitting, standing, kneeling or prone. As the HyperPod II shooting stick features a short bipod attached at the base, it can also be conveniently used when standing or kneeling by simply wedging it against your knee or hip.

The SmartRest selection is huge, with many other great products in the range. To find out more ask at your local gun shop.

To view Eagleye's many SmartRest how-to videos visit www.eagleyehg.com.au.





NEW: ZEISS SFL 40

With the **new ZEISS SFL binoculars** (SmartFocus Lightweight), special moments can be experienced with ease. Optimized to be **as lightweight and compact as possible**, the SFL binoculars are a perfect addition to the SF family.

The **new Ultra-High-Definition (UHD) Concept** ensures true-to-life color reproduction and the highest level of detail. Thanks to its **SmartFocus Concept**, the focus wheel is perfectly positioned and enables fast and precise focusing – even with gloves on. The **optimized ergonomics** and a large exit pupil allow for a relaxed and undisturbed viewing experience and, with the **lightweight magnesium housing**, the SFL are durable and long-lasting over generations.



Find your local ZEISS Stockist at: osaaustralia.com.au







Caldwell Tack Driver X Bag

Caldwell produces a huge range of rests, targets and other range gear to enhance your shooting skills. Products like the famous Lead Sled and a host of bag rests give you all the support you need when in the field or at the range shooting a match or sighting in a firearm.

One new product with a difference in Caldwell's bag range is the Tack Driver X Bag that is now available in standard or, alternatively, a mini size. Touted as the most versatile shooting bag on the market, the Tack Driver X Bag is ideal for the range or when out hunting as its unique shape offers multiple rest options and hence a range of shooting heights.

Ideal for the roof of a vehicle when spotlighting, on the bench or out hunting on foot, this bag is filled with plastic pellets that are lightweight, non-absorbent and will enhance stability when taking the shot.

Weighing 2.9kg, it also offers an adjustable strap for height adjustment, which also acts as a carry strap.

Made of a durable material, the bag also features a rubberised bottom to prevent sliding.

Ask to see the full range of Caldwell products, including the Tack Driver X Bag and X Bag Mini, at your local gun shop.

For more information visit www.nioa.com.au.





The Hunting Club

This relatively new club has been running for a little over a year, with its main aim being to provide members with better hunting opportunities while promoting the positive aspects of hunting to the wider community.

What's more, I'm told it is currently a genuine reason to hold a firearms license in Queensland and a reason to hold an R-license in NSW, which is a reason to have a gun license. Organiser Paul Cooper tells me he hopes to have approval from the NSW police soon to make it a stand-alone reason in NSW and he will seek similar approvals in other states in the future.

With almost 700 active members, the Hunting Club has already given away more than 110 prizes, so the odds in a weekly draw are extremely high. In addition to other prizes, the club is giving away a hunt per week — that's 52 hunts a year to its members by simply joining up. Over the past 12 months it has given away hunts for most species of deer in Australia, buffalo hunts in the Northern Territory,

pig hunts in Cape York and even tahr and red deer hunting in New Zealand. Paul tells me they have even bigger and better ideas for the future as membership grows.

The club also offers a private social media platform to its members whereby they can share photos, videos and chat with other members.

Membership to the Hunting Club is \$120 per year and junior membership is free to children of adult members, however, they are ineligible to win giveaways unless run exclusively for juniors.

To join or find out more about this new club visit www.thehuntingclub.com.au.

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Working up safe highperformance loads

If you want high velocity but safely, pressure signs will guide you, but there's only way to do it.

THE handloader's goal is to gain all the performance possible from their rifle while steering clear of excessive pressures. In order to do this safely it is necessary to avoid increasing the load until the obvious danger signals appear — sticky extraction or leaking primer pockets, all warning you to reduce your loads.

Indeed, why take the risk when there are safer ways of working up to what many call a safe maximum load? Of course, this is a misnomer because common sense should tell you there is no such thing as a 'safe' maximum load.

Pressure developed by a cartridge is the result of internal chamber pressure generated behind the bullet when the powder charge is ignited. It is what provides the projectile with its velocity and energy.

When I started reloading my own ammunition, 50,000 and 55,000psi were regarded as bordering on the safe limit in

regard to working pressures. In modern high-intensity rifles, peak pressures routinely run as high as 65,000psi, which boosts bullet speeds and energy levels to previously undreamed of levels. For these reasons, increased pressure is not only beneficial to the shooter, it is a prerequisite in gaining increased performance.

Most handloaders are aware that the strength of the firearm to some degree is the strength of the cases fired in it, since the brass case is the weakest link in the mechanical structure of the gun. At the moment of firing, the case actually becomes an integral element in the gun itself and when it fails, the gun fails. Since brass is weaker than steel, the question arises as to how the case is able to stand the pressures of firing.

A lot has been learned about the manufacture of brass cartridge cases during the past 40 years. Today's brass is able to withstand much greater

pressures with no problems whatsoever. The manufacture of rifles has also improved to the point that the brass is now the limiting factor (even with improved brass cartridge cases in a strong bolt action). Today's rifles can normally withstand far greater pressure than cartridge brass.

The temperature developed within a rifle chamber at the instant of firing is not only far in excess of the melting point of brass but also higher than the melting point of the steel of which the rifle is made, yet neither brass nor steel melts, simply because these temperatures are applied over such a short span of time that the brass literally hasn't time to yield before the stress drops back to within tolerances.

We're talking about normal temperatures and normal pressures here; if chamber pressures rise far above normal limits, even though the rifle's action may not fail under excessive high-pressure loads, the brass case will be deformed and ruined. The diameter of the case head, rim or belt may be enlarged and the primer pocket so expanded that a primer will fall out of it.

In extreme cases, the brass may be swollen so tight in the chamber that it cannot be extracted by the bolt. When this happens the rifle usually suffers some damage, too.

High-pressure gas leaking back through a rifle's action, carrying unburned powder and brass particles with it, depending on the design of the action, can be hazardous. If the shooter is not wearing some form of eye protection (impact-resistant shooting glasses) he could lose the sight in one or both eyes.

Gas leakage can also wreck the gun. Locking lugs can be set back or cracked, the extractor blown off, the magazine blown out, the stock demolished, and quite often the person holding the gun will be injured. The fact that a

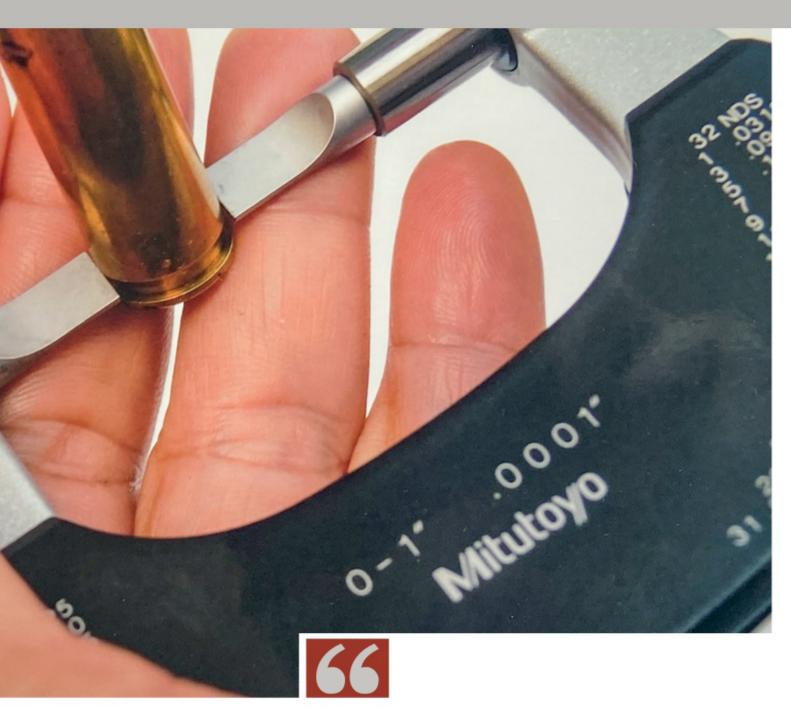


THIS SPREAD

The tops of primers in factory-loaded cartridges show various stages of roundness and have beveled pockets. One exception: the S&B .308, top right, with a square pocket.

2 For accurate measurement of web expansion, the fired case should be miked with a blade micrometer just ahead of the extractor groove on the solid web section.





bolt is seldom blown right out of the receiver or a handloader killed is tremendous testament to the design and strength of modern rifles.

Because today's rifles are so strong and operating pressures are so high, it's even more important that a handloader exercises the utmost caution and uses greater care when assembling cartridges in order not to produce excessive pressures, but still manage to get all the performance obtainable from the rifle.

To do this, it's necessary for a handloader to set some guidelines that can act as an early warning system by indicating how 'hot' the loads are before crossing the red line.

The final element of the case which must be considered is the design of the web, which is the solid section of brass in and just in front of the head. Certain web designs are inherently stronger than others. The web together with the temper, or hardness, of the

The brass case is the limiting factor with most modern bolt-action rifl s."

brass alloy determines the ultimate strength of the case, which in turn represents the ultimate strength of the firearm itself.

Handloaders should realise that the brass case is the limiting factor with most modern bolt-action rifles. The rifle action will stand far more pressure than the brass. However, brass does not generally weaken without warning, but begins to flow as pressure increases (in tiny increments for the careful handloader). The amount cartridge brass flows or deforms under high pressure is directly dependent on the level of pressure applied.

With this in mind, it's understandable that relative pressure levels of your loads can be determined by precisely measuring the deformity of the cartridge brass.

There are a few obvious indicators of high pressure. A perforated or badly leaking primer usually shows up as a puff of hot gas (smoke issuing from the action) that will be felt on the shooter's upper face. It's a good reason to wear protective glasses at all times when shooting.

Obvious physical signs of high pressure include increased effort needed to extract a fired case. In extreme cases, even a Mauser-type bolt action with its powerful primary extraction can be locked up solidly, so that the bolt cannot be lifted by hand. But in any kinds of actions, such a condition indicates a chamber pressure far beyond the limits of safety.

When it occurs, there is a chance that the action has been damaged in some way. The lugs may have been set back, headspace increased dangerously and the chamber of the receiver ring may be swollen beyond repair.

There are different degrees of extraction difficulty ranging from a barely perceptible stickiness on the upstroke of the bolt handle to a locked up bolt. But even the former, no matter how insignificant, shows that the load just fired was an overload in that particular rifle, no matter what the reloading manual said.

There will be other indicators, too.

When the case is extracted you'll find clues to excess pressure in the form of a badly flattened primer with blackening around its edges. The letters and numbers on the headstamp may appear to be ironed out, making them less distinct. On a rifle with a plunger-type ejector housed in the bolt face, excessive pressure generally shows up as a small, clear circle of brass which was extruded back into the ejector hole, forcing the spring-loaded ejector before it. This circle may be scraped off when the bolt is rotated if the extrusion is deep enough.

Visual brass flow (into the ejector hole) is a poor way to check pressure because it doesn't show up until the handloader has gone beyond the maximum level before it becomes noticeable. Once brass flows into the ejector hole, even slightly, or the primer pocket has been expanded, it is generally recommended to reduce powder charge by five percent and rate it as a maximum load.

The primer itself is a controversial indicator of high pressures since there is no reliable way of deducing pressure levels from fired primers of different makes by how rounded or how flat they



are, nor relating two primers of different makes to each other. If the firing-pin indentation is surrounded by a pronounced crater, it's a warning signal; it may mean that your rifle has a weak firing pin spring or an oversized firing pin hole in the bolt face. This could be the case if your rifle was built on an ex-military action, but it is unlikely if you are reloading for a modern rifle.

A cratered primer is definitely a sign of high pressure. This is a safe bet if the primer is also excessively flattened. It should still have some of the radius between the face and walls of the primer cup; if that's gone, the load was a really hot one. If the primer has a flanged appearance when punched out of the case and viewed in profile, the load had already reached a dangerous level.

Some cases have primer pockets that are quite square while others are rounded to facilitate seating. Pockets with square edges fill with far less pressure than those with rounded ones. In round-edged pockets the pressure must be high enough to cause the primer cup to flow into the bevel when the bolt face prevents it moving rearward. This is called riveting. A primer used in a sharp-edged pocket appears to be flat, while a beveled pocket causes the same primer to appear rounded, even if there's no difference in pressure.

Different makes of primers vary in hardness but you can get useful information out of fired primers if you always use the same brand. This allows you to learn what different high-pressure levels look like in your primers and enables you to correlate these signs with other pressure symptoms mentioned previously.

Primers can be a reliable early-warning system which can alert you to nearmaximum and higher loads. However, you should never rely upon one of these signs alone. If you feel slightly heavy bolt-lift but the case head and primer look alright, don't choose arbitrarily to believe the primer and ignore the sticky bolt.

Take everything into account and heed every single sign of high pressure.

All these signs may not appear until after a dangerous pressure level has been reached. Once brass begins to deform noticeably, its integrity has probably been compromised enough to cause an appreciable gas leak that could damage your rifle.

The best method of determining maximum pressure for the handloader is by measuring case-head expansion which does not necessarily equate to factory case expansion. This is carried out by miking a fired cases with a blade micrometer just ahead of the extractor groove in the solid web section. Rather than measuring bulging of the case body ahead of the web, the amount of case web expansion is measured.

Utilising this system, a new, unfired case is strongly recommended for each load, but the same case must be used for all testing with that load. Cases are measured before and after firing to determine maximum loads.

Back in the late 1970s
Hornady technicians gauged
many cases prior to and after
firing in pressure barrels to
determine a usable standard
for the case-head expansion
system of measurement for
pressure determination. This
information was published in
the third edition of the
Hornady Handbook.

They found case-head expansion for low-pressure cartridges like the .30-30 should be .0003 to .0004", while maximum mid-pressure range cases such as the .22-250



Primer cups vary in hardness and show different degrees of flattening and indentation with the same powder charge.

to the .30-06 should be .0005" to .0006" maximum, and belted magnum cases .0006" to .0007" maximum expansion.

These data will vary slightly with different brands of brass due to variations in thickness, hardness and composition, but it provides reliable enough information to prevent the average handloader from getting into trouble.

Estimating pressure by the head-expansion system by taking the reading over the solid section of the head of the case is by far the most reliable method as safe, trouble-free working pressures are directly connected to the expansion of the primer pocket; expansion of the case head over the web indicates that pressure is near the point of expanding the primer pocket before it occurs.

If the web is thin or soft, it expands at lower pressure than one that is thick or hard, with the primer pocket following close behind it. The hardness and web thickness of the case govern the pressure it can safely stand, and any load in a given case must be held to pressures below that level for reasonably long case life and good rifle performance.

Using a standard one-inch micrometer on rimless or belted cases usually requires filing down the rim at two opposite points, making it .002 to .003" smaller than the unfired case just forward of the extractor groove. Use a fine file, as a rough surface may give a false reading. Jaws of the mike should be placed just far enough forward to measure full diameter ahead of the extractor

groove, but not far enough to get a false reading from the taper of the pressure ring.

Some handloaders use the pressure-ring expansion method, using a standard micrometer since the anvil and spindle won't fit into the solid web section of the case between the rim and the pressure ring, so expansion of the web cannot be taken. The jaws of a vernier caliper fit into the space, but they do not provide the accuracy necessary for precision work here. You need accuracy to four decimal places (or ten thousandths). The serious handloader definitely should own a blade micrometer.

The expansion ring system often leads to errors. A major problem is that a sloppy chamber will give a larger pressure-ring diameter than a tight one. Combine this with a soft case that has thin walls and web, and the pressure ring is large enough to make the case appear deformed. This can confuse handloaders and often leads to errors that cause velocity to run far below the full potential of the cartridge or to excessive pressures.

If you want the highest velocity your rifle is capable of delivering with the components being used, you have to increase the powder charge until primer pockets start to expand, then back off below that point to a charge that does not expand it with continued use.

This is the only way you can discover how much pressure your rifle and cases can withstand.



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Tips and tricks

Sick of being led astray and given bad advice? Here are some points to hunt by.

AFTER speaking at another hunting club meeting this week, as well as to members of my own club, it is interesting to see how so many hunters take the word of social media 'influencers' as the gospel. I feel lucky that when I started hunting and getting involved in helping Dad, social media wasn't a big thing and wasn't so heavily relied on.

Nowadays, everything is found online and everyone seems to have a masters degree in hunting before taking one step into the paddock.

ABOVE: A moment like this comes easier with the right mentoring and the right approach.

I'm glad I learnt from trial and error, and was encouraged by some of the best mentors a girl could ask for. Here are some things I've learned about topics that often come up on social media, stirring strong opinions.

Trophies

A trophy is what you make it, not what society claims it has to be.

Yeah, I'm sure we would all love a 40-point red or a 150kg boar and congratulations to anyone who has managed it. But don't forget the image of you holding your first rabbit after weeks at the range. Or

the cull stag after days of hard work and dedication walking the hills.

Trophies are symbolic of the memories made and the effort that was put in.

Hunting locations

I have heard talk of private land game being less of a reward in comparison to public land due to private land being easier to hunt on.

I disagree. The reward for both is the result of the effort put it. Effort and hard work pays off no matter what the location, and both public and private land rewards could be recognised in the same way. A trophy is what you make it, not what society claims it has to be."

Getting your rhythm

What works for someone else might not necessarily work for you.

Getting your rhythm takes time and trial and error. Whether you are glassing all day or walking and pausing, the key is finding the method that works best for you.

On a normal hunting day, I prefer walking, pausing and glassing rather than sitting and glassing.

During the rut, I walk, pause, glass and sit and wait. We have found on our property deer movement can be a little bit sporadic, however, if nothing is moving while we are walking I will sit and wait over a popular water source as the deer come out to feed.

Join a hunting club

Mentors come in all ages and experiences. Anyone who is willing to share a tip or trick is a mentor in my book.

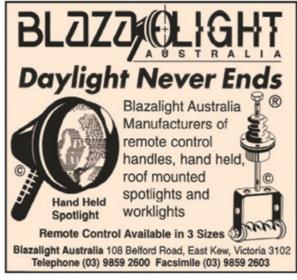
Hunting club meetings and events are a fantastic place to bounce ideas and ask the questions that no one has ever properly answered.

It's safer to ask the 'dumb' questions here rather than on social media.

Questions and practice are the key to success. Enjoy your hunts, enjoy being outdoors.









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Garmin's outdoor range features unparalleled innovation in hiking, camping and hunting tech in handheld or wearable configurations. Options span from navigation, communication, safety and tracking devices. Garmin also produce a range of bow sights with built in range finder enabling better shot placement.

A Garmin eTrex 10 GPS Navigator will be sent to the best entry every month. Thankyou to Garmin for their support in sponsoring this page.

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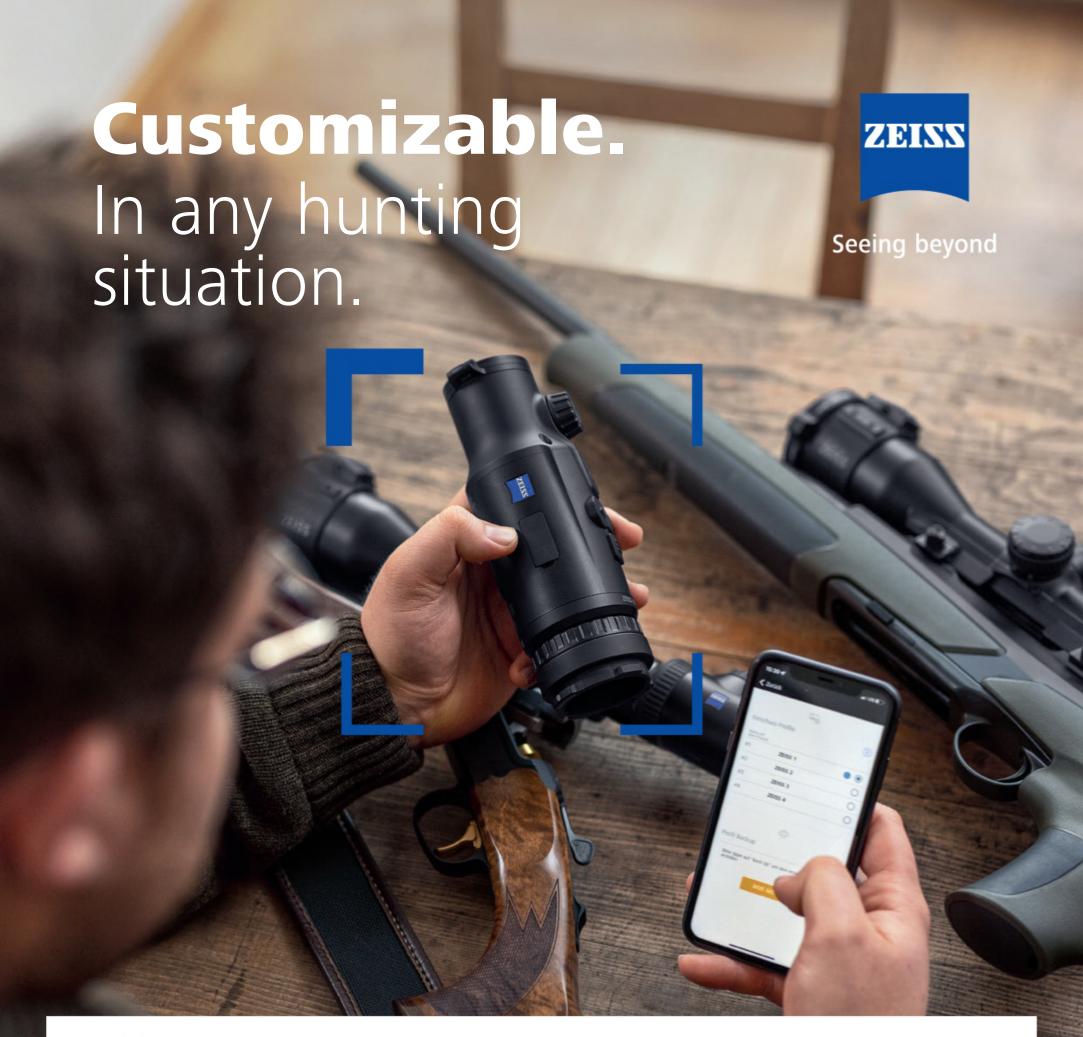
eTrex 10

The completely redesigned eTrex 10 retains the core functionality, long battery life and affordability that made eTrex the top selling handheld in GPS. Then we made eTrex tougher, simplified the user interface and added paperless geocaching for good measure.

Features include:

- High-sensitivity, WAAS-enabled GPS receiver with HotFix® and GLONASS support
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- User-friendly interface
- Worldwide basemap
- Supports paperless geocaching
- Spine-mounted accessories







DTC 3/38

Thanks to synchronization with the ZEISS Hunting app. **ZEISS DTC 3 Thermal Imaging Clip-Ons.**

Ensure that every night hunt is a success – the new ZEISS DTC 3 Thermal Imaging Clip-Ons offer perfectly compatible optics with a large and high-contrast 1024×768 HD AMOLED display, intuitive ergonomics, precise and user-friendly zeroing procedure thanks to the app-controlled

zeroing assistant, and virtually unlimited battery life. In addition, the ZEISS DTC 3 can be connected to the ZEISS Hunting app via Bluetooth and thus offers many customization options. For example, you can save up to four profiles for different riflescopes.





