

CARING, MEET THE MACROPODS

“I reflected on my experience with the joey: the way it held its arms out to me to be picked up just like a human baby would; the way it looked up at me seeking love and reassurance; the way it nestled into my body and went to sleep ...”

— CHRIS ‘BROLGA’ BARNES RECOUNTING HIS INTRODUCTION TO
RESCUING BABY KANGAROOS IN 2013 BOOK *KANGAROO DUNDEE*



Photo: Maria Taylor

The other day I was again stopped in my tracks as I observed an adult Grey kangaroo effortlessly clearing a 4-foot (1.2-metre) fence in my neighbourhood. Wildlife rescuer Dr Rosemary Austen told me that a large male apparently cleared a 6.6-foot (2-metre) fence at their animal recovery centre. The approach might be side-on, not unlike a human competitive high-jumper.

Of the pouched mammals called marsupials, six large kangaroo species and seven species of wallaby are closely related and share the genus name *Macropus*, derived from ancient Greek for 'long foot.' That includes the Red kangaroo, the Eastern and Western Greys and the Wallaroo/Euro that are the target of the commercial hunt. (The Antilopine kangaroo and the Bernard's Wallaroo in the northern tropics are not commercially hunted).

The outstanding evolutionary success of *Macropus* in a changeable and often harsh environment over millions of years has been attributed to three traits: they ferment grass in the foregut before the contents are released for further digestion and thus hold food for longer and recycle components of metabolism; they hop; and they have an economical pattern of reproduction.¹

While a similar foregut digestion pattern characterises sheep, cattle, and camels, kangaroos are able to utilise much poorer vegetation with low nitrogen content and Wallaroos/Euros can survive without drinking much water because of their unique metabolic processes. Kangaroos also have a lower metabolic rate than same-sized introduced mammals, meaning their energy requirements are less.²

There is an oft-misunderstood comparison between sheep and kangaroos and their impact on grazing land. Research has shown kangaroos use less feed to maintain energy individually and in aggregate than the same number of wool sheep, let alone meat sheep or goats. Under normal circumstances, sheep and kangaroos have been shown to prefer different plants, and unlike sheep – or

unless confined by modern circumstances – kangaroos know when to stop eating, move on, and protect their resource.

A UNIQUE AUSTRALIAN

The distinctive athleticism, speed and energy efficiency shown by the large kangaroos is on display with movement across the countryside – movement that has awed those who appreciate the unique, from tourists to advertising agencies.

The advantage of hopping as a means of locomotion was discovered in 1973 by Australian biologists Terence Dawson and Richard Taylor. Dawson has studied kangaroos for 50 years through the University of NSW and its Arid Zone Research Station at Fowler's Gap. He poured this knowledge into the seminal book *Kangaroos*, which tells the reader most of what they might want to know about kangaroo physiology, social relations, and unique adaptive features to the Australian environment.

Here I learned that the earliest ancestors of kangaroos are likely to have branched off from a small tree-dwelling possum-like marsupial sometime after 55 million years ago when the known fossil record for marsupials starts. How and when hopping evolved is still uncertain, but the advantages are better described. Hopping, writes Dawson, is an extension of the gallop to achieve higher speeds. One might imagine a highly energetic possum doing this on the ground to avoid predators.³

The fossil evidence indicates the macropod ancestors of today's species appeared somewhere between 12 and 28 million years ago. The kangaroo types we see today have their origins at least a million years ago, says zoologist David Croft.⁴

Kangaroos attain optimal energy use at higher speeds. At 22 kilometres per hour, hopping provides substantial benefits, using about 25 percent less energy than that measured for a dog running at the same speed. At 40 kilometres per hour, the gap could widen further

to 50 percent energy use compared to a four-footed mammal. “This energy efficiency, together with structural specialisations, allows kangaroos to go even faster. If given time to get moving they can out-speed quadrupedal predators such as dingos.”⁵

In a country where the weather has long been boom and bust, economy of movement allows kangaroo mobs to travel rapidly for relatively large distances, like 25 kilometres, to the next ephemeral rainfall and better food. This is particularly an adaptive advantage for arid range species including the Red kangaroo, but it is also a reason they have been demonised as descending in ‘plague proportions.’

“Kangaroos are really special mammals,” says Dawson. “Work over the past half century has turned the notion that they belong to an inefficient, primitive group of mammals totally on its head.” Together with American and Canadian scientists, he identified another handy adaptive feature: the use by the kangaroos of their tail as a “fifth leg” for forward momentum while grazing, which they do much of the time.⁶

As with much previous work, this discovery also relied on study of the heavily hunted Red kangaroo – the largest of the remaining kangaroo species. Published in 2014, the finding was that when grazing, these large macropods move both hind feet forward as a pair while the tail is more than a resting point. It releases movement energy just like a leg would. The researchers established that the muscles in the tail as well as in the hind legs are highly aerobic, with a lot of mitochondria – the power houses in cells that provide energy.

Zoologist David Croft, who across decades straddled the divide between academic and advocate, and also conducted research through the University of NSW and its Arid Zone Research Station at Fowler’s Gap, thinks we would do well to emulate the kangaroo and call ourselves ‘a kangaroo’ with pride in this country.

He wrote that, “if we did, we would be celebrating diversity, the successful occupation of most of Australia’s terrestrial ecosystems, resilience to our climatic extremes, athleticism, careful conservation of energy and water needs, and individualism in a rich social life”. Croft also encouraged Australians to learn from the Aboriginal peoples that we are part of the land, and with the kangaroo, re-establish our relationship to it.⁷

ROLE OF NATIVE GRAZERS: VITAL FOR ECOSYSTEMS

If you go looking for studies on the ecological roles of native grazers, as I have, you will come up short, because there is hardly any literature. This lack is allied with the wildlife management focus and funding aimed at studies to benefit commercial interests, particularly for the pastoral industry since colonial times.

Macropod biologist Dan Ramp, who co-founded the Centre for Compassionate Conservation at the University of Technology Sydney, has given some thought to the ecological value of macropods and common species of marsupials in general. He provided independent information to the administrative appeals tribunals in Canberra, Australian Capital Territory, and to officials in that jurisdiction, where kangaroos are killed annually on city reserves and on pastoral leases administered by the ACT – to little avail. Instead, the ACT doubled down, with a novel ecological argument for its killing program. More on that in a later chapter.

Ramp starts from a basic point – healthy ecosystem function is intertwined with the species that evolved with that ecosystem. For native grasses and grassy woodlands, that includes native herbivores. He highlights the importance of remaining native herbivores (common kangaroos, wallabies, wombats) as key species in grassland ecosystems. They have a role in maintaining environments beneficial to other species, like grassland insects and reptiles. Mostly overlooked is their key role in keeping ecosystems

functioning when other rarer or endangered grassland/woodland animals drop out.

“Native herbivores, such as kangaroos and wombats, play a vital role in ecosystems,” he notes. “They can play key roles in conferring short-term resistance to reductions in ecosystem functions, as rare and uncommon species are lost from the system. We now have entered earth’s sixth mass extinction event, this time human driven. The setting aside of protected areas may not be sufficient to prevent loss of biodiversity.”⁸

Kangaroos can be regenerators of native grasses in a number of ways. Their movements and activities across the ground can disperse and bury grass and other seeds. As nutrient recyclers, their urine and faeces are well-matched natural fertilisers. Their role in grassland regeneration, with seed dispersal after drought and fire, evolved with the continental ecosystems. Unlike introduced livestock, kangaroos do not disturb or pull up root systems, and therefore grasslands regenerate quickly. Kangaroos are also soft-footed, and don’t compact the soil or cause erosion, both of which impacts damage native plant ecosystems.

Historical records show that kangaroos were plentiful in the grasslands and woodland ecosystems the settlers found. Kangaroo home ranges tend to be areas that offer shelter near some food source.⁹ Europeans in the longer term did not improve habitat beyond a short-term flush of grass after clearing. Dams and stock water points were established, but natural water courses were being silted up and the riparian zone eroded by introduced stock.

A lot of argument and mythology in Australia claims that kangaroos breed in ‘uncontrollable’ and intolerable numbers, requiring lethal management. The public is left with the impression that the kangaroo species, where the female may have one joey a year and infant mortality is high, somehow matches pigs, goats, dogs and cats, some of which produce litters of up to 10 every year.

There is research showing that kangaroo populations are naturally stable over time. Dan Ramp was part of a team that conducted a seminal study at Yan Yean reserve in Victoria at the end of the 1990s. That study, in a confined area where the researcher had access to historical data, took place in a temperate grassland ecosystem with Eastern Grey kangaroos minus natural predators or road-kill possibility. The kangaroo population reached equilibrium and stayed stably self-regulating over a 50-year period.¹⁰

Anecdotal stories I learned from Canberra suburban householders told how they lived with neighbourhood kangaroo mobs for 20–30 years, called them friends, and observed stable numbers overall – until recently, when the government came to kill them.

WHAT THREATENS NATIVE GRASSLANDS? START WITH INVASIVE WEEDS

In July 2013 I reported on biodiversity in the Queanbeyan Nature Reserve bordering Canberra. By this time, kangaroos in the ACT were suddenly being painted in government press releases as a threat to various endangered species, including the Grassland Earless Dragon. In the Queanbeyan reserve, where no culling took place, three of Australia's most endangered species were recovering or maintaining their populations following a drought that hit the area five years earlier.

One was the Earless Dragon whose population count had dropped from 50 to nil during the drought. But by 2013 the little lizards were recolonising the reserve. The other two endangered species there were the Golden Sun moth and the daisy-like Button Wrinklewort.

The NSW government ecologist based in Queanbeyan said that habitat conditions – dryness, for example – were the operative influences on the presence of these species. The scientific view here was that sympathetic grazing by unregulated native grazers or

modest stock numbers was a natural sequence, keeping the country open with varied grass heights. In turn, these created shelter for other species. The patchwork pattern retained soil moisture and encouraged insects – food for the dragon, for example.

Grassland grazed by unconfined kangaroos retained tall tussocks, which disappeared with heavy stock grazing. In similar fashion, a 2012 national recovery plan for the Button Wrinklewort lauded kangaroo grazing for keeping the landscape open for this native plant. Domestic stock will eat this plant but kangaroos don't. The Golden Sun moths were also doing well in a grazed, diverse plant community.

Weeds, according to the ecologist and to recovery plans, are far more of a threat to endangered grassland species than native grazers. Other threats are habitat fragmentation, agricultural practices, urban expansion, changed fire regimes, and predation by domestic and feral animals.¹¹



Photo: Maria Taylor

“Kangaroos have a social life not unlike humans, with strong mother and joey ties, companions, relatives and the like. When continually shot, kangaroos fret for loved ones, [and are] forced to live their own lives in a state of spasmodic terror. Kangaroos can be and are horribly wounded, in pouch joeys are bludgeoned to death. The out of pouch joeys, all alone for the first time in their short lives, panic-stricken after witnessing the brutal death of their mothers, are left to die from starvation or hypothermia (or foxes). The survivors live in a state of constant fear with proper social order in constant disarray and upheaval,” wrote former kangaroo shooter David Nicholls.¹²

There are a lot of kangaroos now in my neighbourhood on the fringes of Canberra, the national capital that kills the national emblem. The countryside is rural residential – a mix of hobby block farming, people who feed horses, and people who live in remnant bushland that escaped or has regrown from the clearing for sheep grazing 75 to 100 years ago. The grazing activity led to widespread land degradation on relatively poor soils.

In a nearby new subdivision I have seen 20 kangaroos on newly-laid turf in front of a house. Across the street another 20. More on other blocks. All land that used to be their home range. They have nowhere else to go while big landholders continue to shoot on adjoining properties. In addition, sometimes deadly fences, dogs, and motor vehicles are the main predators.

There have been times when discussing the research findings for this book that I was asked why people should care about the fate of animals that are regularly described as units of production or ‘pests.’ Good question, so I decided, in addition to sharing the unique qualities of kangaroos just described, to visit some caring experts in my region to pose that question and find out more.

Not far from where I live, Rosemary Austen and her partner Steve Garlick rescue or take in the injured victims of car, fence and malignant

humans at their Possumwood Wildlife recovery and research property. More caring work is carried out by dedicated volunteer wildlife rescuers operating through an organisation called Wildcare in our area. At Possumwood, Dr Austen, a general medical practitioner and also credentialed microbiologist and zoologist, performs first responder emergency care. Then begins the challenging phase of long-term recovery care, which is not the easiest with wild animals.

At any one time, Possumwood has had 40–50 animals in residence, including kangaroos, wallabies, wombats, birds, and other road and fence casualties. Most recently: bushfire victims. They once helped an eagle recover. Across 15 years, several thousand animals have been helped and released.

Rosemary's partner Steve Garlick is a professor of economics and more recently has turned to research in animal behaviour and ethics. In the early 2000s he was a founder of the Animal Justice Party that now affords a political platform to animal issues in state and federal elections. Together they have written papers on the emotional lives of Australian native animals and their on-ground experience of post-traumatic stress disorder in these animals, as well as on trans-species learning.¹³

Their rescue work has demonstrated the close link between emotional stability and family and group structure for social animals like kangaroos. Indeed, Steve and Rosemary have seen that the will to live, exhibited by rescued joeys, depends on these social links. (Contrary to a common Australian myth that joeys, orphaned by human activity, are tough little nuggets that bound off into the sunset to live happily ever after.) Exhibiting symptoms of post-traumatic stress, as do humans – including inability to settle or relate, heightened anxiety and hypervigilance – rescued animals, and that includes domestic captives like pigs, need a de-stressing therapy routine and the opportunity of re-bonding with others, not always of the same species.¹⁴

Kangaroos, wombats, birds, little possums, and gliders that need emergency surgery end up in the clinic of another local legend – veterinarian Howard Ralph, a big man with hands to match, who performs the most intricate, seemingly miraculous repair work on small bodies. He's known as the vet who can or will fix a broken kangaroo leg where others can't or won't. I talked to both of them – at an earlier time for articles, and more recently to learn what they have learned from working so closely with animals that are commonly lumped together as undifferentiated units in populations needing management.

RARE RECOGNITION FOR SAVING WILDLIFE

At an Australia Day ceremony in 2016, where she was honoured as Bungendore Citizen of the year, Rosemary Austen told the audience that many regional residents have been terrific in their concern for wildlife, bringing hundreds of injured creatures to Possumwood, often in conjunction with Wildcare or the Native Animal Rescue Group.

She highlighted the health benefits of getting involved and volunteering somewhere. She praised fellow honourees the Bungendore Show workers, and admitted that she has allowed herself the time and pleasure to enter (and win) some flower arranging competitions at the annual show in early February.

Later, I sit down with Rosemary at a Bungendore café. A small woman with short-cut greying hair and an unflappable, sweet manner, Rosemary is everyone's favourite auntie, fronting an immense amount of professional training and physical stamina that she dedicates, along with Steve, to rescuing and releasing native animals. Most days she first puts in a full shift seeing human patients. At times she has ended her day by driving for two hours to a less populated release site to check on her kangaroo patients. There were many return journeys taking the animals there singly or in pairs in the first place.

Returning along a lonely country road at 1am, she said it's not unusual to pick up another patient hit and left there by a human behind the wheel. Like the wombat with the spinal injury who could not roll over. Rosemary stopped and checked her pouch, at which point "the dear little thing opened her eyes and looked at me in terror".

Nevertheless, a rescue had to be effected knowing that the wombat would either die of hypothermia or a fox would rip her open. So Rosemary rolled the big animal into a blanket, picked her up, and took her home for assessment and care or euthanasia. It wasn't easy work. She says ruefully that after 20 years of rescues, both she and Steve are not getting any younger. They are starting to notice the effort of picking up and carrying 30-kilogram-or-more kangaroos caught in fences or hit by cars, or wombats in this case. But that's still said as an aside.

We talk about her animal patients and their personalities. "Every animal, every kangaroo, wombat, possum, they all have different personalities," she says. "It's very prominent in the Eastern Greys because they are such emotional animals – they really do relate to humans.

"That's the sad thing because when they develop a bond with you, they love you, and it's such a shame they are treated so badly because they are an animal that develops a very strong bond. Wombats and wallabies once released tend to become wild. But the Eastern Greys, I've got animals down there [at the release site] like Lindsay who came in as a teenage kangaroo with a head injury, a broken arm, a fractured pelvis, she'll come up and give you a big cuddle. You call them and they'll come over and give you cuddles. It's just beautiful, I love it."

I note that while I'll provide a sanctuary, a supplementary feed and a friendly voice, I haven't progressed to physical contact. Rosemary admits that it's the carer role, often from infancy, that would lead to cuddles. "I'm like their mother."

Elaborating on the voice recognition, she tells me that at another release site she may not have visited for six months, “I’d just stand and call for 15 minutes and then I start seeing little heads popping up, and they’d stand and watch me and listen, and then eventually I’d have 30 animals around me”.

She tells me a touching story from the neighbourhood that involved a very big male kangaroo who got caught in a fence. To gain release he almost ripped his ankle off. He was very incapacitated and became very agitated when any rescuers came near. “The lady from the property was so upset, she really loved this kangaroo. And he knew the voices of the family. When this lady talked to him, he calmed right down – totally different body language.” She kept him calm as the decision was reached to euthanise him. “That family was devastated, it was very sad,” she says.

WEEKLY TALLY OF TRAUMA INTERVENTION

Rosemary gave me a glimpse of the grim reality that Possumwood experiences on a regular basis.

“[In one week] we had a 60kg male motor vehicle accident at night; a very wild young male caught in wire; a hypothermic 2kg joey with bilateral tibia fractures [he had been lying in a paddock in heavy rain all day]; and a poor mother who had been shot in the face by a landholder on Bungendore Road.

“The wound was seething with maggots and she was blinded by the bullet as it exited the face. Her joey was still alive but emaciated and severely dehydrated. A similar case from the same area a couple of weeks ago presented a kangaroo with its jaw blown off – it died.

“The killer tells people he has tags [permission issued by the NSW National Parks and Wildlife Service] and it has been reported that he goes out at night on his quad bike and shoots anything he can find.

“[A fellow kangaroo defender] darted the mother and she seemed relaxed in our peaceful enclosure with the other kangaroos. Little Ian her joey required intensive fluid treatment and nutrition.”

Rosemary tells me later that both mother and joey did not survive. Complaints to the National Parks entity that hands out shooting tags about the incompetent shooting went unanswered as did complaints to the animal welfare organisation RSPCA.

“Steve and I have done so many rescues over the past 15 years. Some of the rescues are difficult and dangerous but they are the easy part of the work we do. It is the care and treatment of the rescued animals which is time consuming and challenging. At least in my day job [as a general practitioner and locum for aged care facilities in Canberra] I don’t have to catch my patients before I treat them!”

A SURGEON FOR ALL SPECIES

Howard Ralph, based nearby, has been indispensable to local wildlife carers and they all call him Howard. not ‘Dr.’ He goes where other veterinarians don’t or won’t go, and he has an awesome lifesaving track record. He is over six feet tall. His hands are commensurately large. It’s hard not to marvel at how he does such delicate surgery on some pretty small or challenging anatomy.

One wildlife carer, who over the years had taken many wombats to Howard for treatment, recalled how he fixed the back leg of an eight-year-old Eastern Grey kangaroo that had hit something and dislocated her back leg. “It was completely facing the wrong way. Other vets would just have euthanised her, but Howard managed to pull the leg back into the socket, which wasn’t easy, tighten up the ligaments which he then stitched up, and splinted and bandaged the leg.”

Post-operative care often poses the biggest challenge. In this case it worked because ‘Tinkerbell’ was fairly habituated to humans and did not stress in confinement. Wild adult kangaroos are amongst

the most challenging cases because of the need to restrict the patient in post-operative care and the stress that it causes. The operations Howard calls standard, but the post care is not, because kangaroos die of stress.

Very many of his patients are the victims of cars – with large numbers of broken kangaroo legs, broken tortoise shells, lizards with back injuries, baby wombats with run-over mothers. He has resuscitated a kangaroo in cardiac arrest. I saw a little possum that was picked up from a Sydney street with an ulcer on one paw (now covered by a big, white bandage), a bad skin rash, and liver damage.

All manner of birds are also brought in, like the tawny frogmouth that was completely paralysed. Howard treated him for several different infections of the brain and he recovered. The doctor does a lot of surgery on eye injuries and cataracts, because most wildlife cannot survive blind.

His admirers say he's never turned a person or an animal away. His clinic largely relies on a fund-raising charity and other donations, and the considerable support to the practice of his wife Glenda, who works as a physio and nurse (also both human and veterinary) in Braidwood and in Queanbeyan.

Howard's training as a paediatric anaesthetist came after he was already qualified in veterinary medicine. (He says part of the reason he got into human medicine is that he could then help out his elderly parents.) The infant anaesthetist training honed his skills in getting tubes down narrow and short throats that often present in wildlife work.

“He could have had an easy and wealthy life as an anaesthetist, but instead he's chosen this. He's saved thousands of lives,” says one of a small cadre of dedicated volunteer assistants. The volunteer says the doctor now gets constant calls to give free veterinary advice to people from all over the country and even overseas.



Photo: Bill Waterhouse

'Mum' is a Bare-nosed ('common') wombat, resident at a sanctuary near Braidwood NSW.

WOMBAT BRAIN SURGERY

Asked to recount a recent challenging case, Howard tells of a wildlife carer who brought in a 2kg baby wombat which looked alright, but had a terrible smell coming from a small hole in its head. It was infected, and on examination related to a compound fracture of the skull which was starting to destroy the brain.

Several multi-hour skull operations were followed by a post-operative period just like a human case, with tubes and monitoring. The wombat survived and is now doing well.

Howard says he is busting the myth that wildlife cannot be treated successfully. He chose to dedicate himself to that arena after seeing the effects of the 2000 bushfires on the South Coast of NSW.

He later volunteered following floods in Queensland and after the Black Saturday bushfires in Victoria. Those had a horrific impact on wildlife (Swamp wallabies with their eyes burned out, faces burned off, and so forth) with very minimal help available.

Howard and Glenda's wildlife clinic is tucked away on an old farmstead dominated by remnant bushland, not far from Braidwood. As I arrive for a catchup interview on a Sunday morning, I encounter a man from somewhere north of Tamworth (an eight-hour drive of about 900 kilometres) who arrived with a joey suffering from fractures to both back legs due to car strike.

Glenda had warned me that the doctor was up until 4.30am the previous night performing surgery. Post-op care with a volunteer nurse was going on and Howard would not be with me for another 45 minutes. (Later he joked that the couple had lost all their friends because these unexpected emergencies were the pattern of their life.)

The three-hour operation on the young Eastern Grey kangaroo repaired the fractured tibia bones and undid some crooked healing that had already taken place. The patient had splints on both legs from hip to toe and was expected to make a rapid recovery back at the carer's place in northern NSW.

These days Howard is consulted by other veterinary surgeons and carers from around Australia. Despite increasing interest, there are still varying opinions amongst veterinary practitioners about the value of treating wildlife and also there is still a widespread lack of experience in dealing with the more complicated surgical cases – coming after many decades marked by the common practice to simply shoot badly-injured wildlife. The money is another issue. Howard's clinic is supported by fund-raising, by community volunteers, and by the work both he and Glenda do in human medicine. It's barely enough to cover the need. But most vets don't have such support – the government does not subsidise as for human medicines and they are expensive.

So it is not unusual for Howard to receive an unexpected patient from far away, as on this day, or from even further afield. That's in addition to the flow of local wombats in particular, or of kangaroos or other wildlife that have come off second-best tangling with humans and their machines or fences.

As he trains nurses and veterinary students, Howard thinks that there is a turning tide in Australia of better understanding and appreciation for the wildlife and what is being done to the animals. On the other hand, he has also received death threats and promises of violence. He sees enormous forces still arrayed on the side of traditional views and against defenders of wildlife.

DUCK HUNTING SEASON – WHAT'S HE DOING HERE?

Howard's been told on numerous occasions that he's wasting his time. For example, by duck hunters who enjoy blasting the fragile life flying overhead and don't appreciate the volunteers who try to help the wounded on the ground, notably in Victoria.

He has seen volunteers roughed up, taunted and threatened. It has also happened to him as he prepared to help critically-injured wildlife in the aftermath of horrific bushfires that destroy a lot more than human property. He's been pushed around by property owners who say the only concern has to be humans.

And criticism comes not only from frightened property owners and duck hunters. Howard often hears a familiar narrative from people who say they are environmentalists or scientifically trained. "People say to us, firstly what you're doing is a waste of time. Secondly, it doesn't consider the survival of threatened and endangered species. Both of those things are not true. And thirdly they say, from a biological perspective, we're not really interested in 'a kangaroo, we're interested in a population.

"Well, we are interested in individuals, and guess what: individuals make up communities. Because our patients are part of a group,

we feel protective for the species and its survival. We've taken over their environment, and then people say, there are 'too many'. Well, it's just because we've destroyed where they would naturally be."

What he wants to emphasise on this Sunday morning is his sadness at the disrespect shown by too many Australians to native fauna. That is particularly an attitude towards 'common' fauna like the wombat or the kangaroo species or the Brush-tail possum, let alone lizards, snakes and spiders. "All living things need to be treated with some dignity and respect, that is our guiding principle. Our charter is we will help any living creature at all who is in distress."

Howard has travelled widely and knows that in many places there is no wildlife left. He has hosted international veterinary practitioners and journalists. "You talk to people from other countries and they are always astounded at how disrespectful we are to our precious wildlife," he says, noting Australian domestic narratives about wildlife remain a hangover from the colonial days.

Many people have only a fuzzy or non-existent understanding of ecology, the web of life, and how plants, animals (including all the micro-organisms) and the landscape that we depend on, have co-evolved. There is just a bedrock belief that technology will save us regardless of what we do, he says.

WHAT ARE KANGAROOS LIKE PERSONALLY?

I ask Howard what is his experience with macropods, the kangaroos, on a personal, behavioural level? They are all different, he answers – physiology, behaviour, different age groups, and response to treatment or anaesthesia requiring different levels of sedation and post-operative care – which makes his work such a specialised field.

"They are all individuals, not just a furry opportunity to kill something. Talking about Eastern Grey kangaroos, being the ones that get the worst rap usually, they're lovely creatures in fact. They

are quite endearing, very gentle in their behaviour. Just because some large male kangaroo that is protecting the mob gets cranky when people invade – that’s normal.

“From our perspective, we’re dealing with them all the time, they are very gentle and quite tuned into human behaviour and needs. Even though they come from the wild, in a very short time they adapt to what we need them to do, with feeding and so forth.

“The other thing is that they are very sensitive creatures, so that if they are not treated with some dignity they really do suffer badly from a number of well-known conditions that occur and that can be fatal, like myopathy. We see it all the time and it’s a lot more complex and wide-spread than you would see from a text book.

“Any significant stress or upset can precipitate them going into skeletal or cardio myopathy in particular. Then they die of heart failure either straight away or in a month or two months’ time and kidney failure. It’s quite complicated.

“They have a very definite and complex social structure. If you disrupt that either to an individual or as part of their society, then it has profound effects on their survival. The way I or you approach them makes a huge difference.”

I tell Howard that I talk to the kangaroo family of mothers and joeys that stays close to the house, and even to those further afield. They have come to recognise my voice, visibly relaxing when this human shape in front of them talks in a friendly fashion or copies their body language, like a bend-over scratch. They come off alert posture, and return to feeding or stand around and scratch too. I jokingly ask whether I’m putting them into stress by saying ‘no’ some days when they come around to be fed?

What he does know for sure is that as a medical practitioner, the way he approaches them makes a huge difference to their outcome. Not rushing in, for example, to stick something in their ear “which I wouldn’t do with any patient – be it a dog or a small human primate

that we call a child. Same applies to little kangaroos, little echidnas, birds, or whatever”.

He says he always talks to his patients before he does anything as he would with a human. “I’m sure they take comfort or dislike from the tone of your voice. And they suffer from all the psychological impairments that we do, like stress, anxiety, fearing pain, becoming depressed – even though some people may not recognise that.”

Later, when I meet up again with Rosemary and we talk about her extensive work in animal first aid and rehabilitation and the research on post-traumatic stress, she agrees that it is voice that the animals recognise over mere physical presence. The uncertainty is compounded when the costume changes, as when she is dressed for her day job in the city as a human general practitioner. “They don’t recognise me. But as soon as I talk they relax.”

Stress and pain management are major things to concentrate on with wildlife medicine, continues Howard. They suffer pain just like any creature with a nervous system. They may not show it as we do by screaming and yelling. The body language is very subtle and that comes from living in the wild. “If you have a sore leg, you don’t want to alert a predator that you’re the one that is hurting.”

Birds too are very susceptible to stress, he tells me. “You go to the duck shooting – and they shoot everything that moves, darters shot out of trees and pelicans shot out of the sky. Some birds will cope with the stress of being shot at in the sky, like Grey Teals and Pacific ducks, but you get little Pink-eared ducks that always die, even if they are not shot, just from the disruption of their environment with 3000 shooters opening fire before dawn in the middle of the wetlands – the birds just die from stress.”

CHALLENGING CASES, MELODY’S STORY

What was a particularly challenging recent case? I ask Howard. He recalls the case of a young adult female who was brought in after

being hit by a car. Rosemary brought in the young doe, one of two female kangaroos with joeys in pouch, both hit by a vehicle at a major interchange outside Canberra.

One mum didn't make it, but the other, Melody, as this patient was named, was rescued by a good Samaritan, risking his own life against the commuting drivers, some of whom didn't want to swerve for animal or rescuer. A couple of army personnel also stopped to help get the dead and injured off the road.

Melody was having trouble breathing and was in significant difficulty. It turned out that she had a ruptured diaphragm. This is called a diaphragmatic hernia, in which abdominal matter has worked its way into the chest cavity. Gradually more and more of the stomach, bowel and liver can work their way into the chest and impact the lungs so the patient can't breathe and dies.

In the course of a four-hour open chest cavity surgery, Howard performed the challenging business of removing the stomach material from the chest cavity and repairing the hernia, after finding and accessing the tear. The anaesthetic was difficult because in this case the lung had to be ventilated and procedures instituted to ensure the lung did not collapse. "All in all a fairly complicated thing," he says with trademark modesty, adding that this method is standard medical practice for all creatures. In his clinic it's all part of demonstrating daily that the same works for wildlife.

Other challenges are met in different ways. Like the case of one baby wombat, one of many whose mothers are killed on the road. This baby was in the pouch, but the legs were protruding. A fox came on the scene and began eating the baby, starting with the feet. A good Samaritan rescued her and brought her in. She had fairly significant damage to two feet. "So we repaired that. She was only little, so we knew she'd have to come back. When she was about a kilo she came back because her claws were distorted and she couldn't use one front foot and couldn't dig."



Photo: Rosemary Austen

Melody recovering.

Howard and his nurses reconstructed her ‘fingers’ on the front foot, having to lengthen some and reduce others so she eventually ended up with a normal foot. She grew up to be a normal functioning released wombat.

Many wildlife carers have been trained here how to keep going with medications, dressings, and monitoring in the recovery stage. Here again, stress more than physical response can be the killer.

LIKE BEING IN A WAR ZONE

Turning to human stress, we talk about the pressure facing the relatively small number of activists, rescuers and animal first responders in a society that officially does not share these values. It is often like being in a war zone, concedes Howard.

“I’ve known people in my medical career that have been to things like the duck shooting. Facing shooters on any front and the negative, aggressive, hostile contact they can face really does take its toll. Attending things like these so-called culls [as in neighbouring Canberra] and seeing the end result and rescuing those that are not

dead yet ... these people do suffer things like post-traumatic stress, coping with the awful things they witness.

“I know three people during duck shooting who were shot. Two I referred to the local hospital and to the local police who were not the slightest bit interested because we were rescuers.”

It's not an easy experience for those citizens who have volunteered to fill the void created by poor or non-existent government support for all of the nation's wildlife. Animal rescue and rehabilitation tends to take over people's lives, the need is so great, and increasing. It comes with challenges and down-sides, not least the personal economic cost and the necessary setting aside of freedom to come and go.

There is the ever-present question about how and where to release rehabilitated wildlife, and the eventual realisation of personal burnout. As with other national volunteer organisations (not least the voluntary fire services) the average age of wildlife carers is in the 50s, 60s, and 70s. Will there be a new generation picking up the pieces when these baby boomers retire for good, or can this generation finally hope for true conservation in public policy?

Despite the cost, Howard lives in hope that those rescuing and defending wildlife have increasing influence in Australian society. He sees it on the veterinary front. Following the 2020 catastrophic fires and wildlife destruction, time will tell. Perhaps the 2020 duck hunting season in Victoria, that politicians waved through despite calls to stop it under the circumstances, was a harbinger: very few ducks and very few hunters. Of course, affecting human activity in that year was the global virus pandemic linked to other human mistreatment and exploitation of wildlife. But that is another story.