

Foundation for Rabbit-Free Australia

Newsletter Volume 38, June 2023.

Foundation Matters

Updates and notices for Foundation members and partners.

Greg Mutze bequest

A very generous bequest has been received from the estate of the late Greg Mutze. Greg was a long term supporter of the Foundation and a dedicated researcher who gained international recognition working on rabbits and other pest animals. In further recognition of Greg's contributions, a former colleague of his has made a similarly generous donation. It is humbling, and uplifting, to receive such support; and it gives us confidence to continue investing in the aims of the Foundation.

Volunteers

Rabbit-Free Australia relies on volunteers to ensure we can provide professional services while still directing the vast majority of income to the aims of the Foundation; raising awareness, promoting research into better rabbit control, and promoting the adoption of science-based rabbit controls.

Enjoy 'Meet some of our volunteers' to see the different ways our valued volunteers assist. If you, or someone you know, is interested in helping out please get in touch. We have a tonne of ideas to explore and a warm welcome for anyone helping bring them to fruition.





Membership Options

There are now even more ways to be a member of Rabbit-Free Australia. In a bid to better meet the needs of busy people and organisations, be they a local community or Landcare group, a state agency, an NGO, or a private company the Committee have:

- Enabled an auto-renewal (pay by credit card only) option.
- Introduced several Group options, where the group can vary the individuals involved as circumstances change, and where there are concessions for additional members.
- Reduced the annual fee for Corporate members, recognising that their servicing costs and voting rights are identical to individual members.

Annual membership renewals are due soon. Please keep an eye out for your renewal reminder email. If you would like to change to one of the new membership options please get in touch, or log-in to your membership profile and make the change on-line.

There are membership options to suit all needs. For more details see our website (**Join Us**) or download **Membership Options**.

Individual: Yearly renewal	\$50	Family - 2 adults & up to 3 children \$9	
Individual: Auto-renewal	\$50	Group: Up to 3: Self-determined# \$12	
Individual: 5 year	\$225	Group: Up to 5: Self-determined#	\$190
Individual: Student	\$Nil	\$Nil Corporate	
#Establish your own group	('bundle') and c	hange the individuals in it at any time.	

Research Projects

Two new research projects have been commissioned by the Foundation this year:

- Biocontrol model. David Peacock (University of Adelaide) will explore
 the potential of a herpesvirus from overseas as a rabbit biocontrol in
 Australia, using a model of a rabbit population (developed with data
 from the Turretfield monitoring site). The modelling will indicate whether
 further work on the prospective biocontrol may be warranted or not.
- Turretfield tissue library. Meanwhile, work is underway to save the
 library of rabbit blood and tissue samples collected over 25 years at the
 Turretfield site. The samples contain generations of genetic data and
 information on virus activity. They must be moved from their current
 storage and rabbit geneticist Amy lannella will assess and catalogue
 them prior to relocation in the University of Adelaide's Biobank,
 safeguarding the resource for future research. Talks are already
 underway with international researchers on a potential project using the
 globally significant tissue library.



Major conferences provide opportunities to raise awareness and share knowledge, and to build networks and partnerships. Conference registration fees will be met for speakers at two conferences this year:

- Foundation Patron, Brian Cooke, will present to Ecological Restoration's world conference (Darwin) on 'Time lags between action and results in restoration', citing rabbit control with RHDV as an example.
- Executive Officer Peter Day will present at the national conference of the Australian Rangelands Society (Broome), on 'Passing the baton: Engaging the next generation in rabbit management'.

Peri-Urban Rabbits

In recognition of the seemingly ever-increasing problems posed by wild rabbits in urban and adjacent lands across Australia, we are now trialling a discussion Forum on peri-urban rabbits. It is a flow-on from the Australian Rabbit Managers Network that we facilitate in a collaboration with CISS.

Around two dozen people have been invited to take part, coming from Landcare type bodies, regional NRM, state agencies and local government, across all States. Two Foundation members, Brian Cooke and Amy Iannella, are contributing as 'in-house experts' to help with any technical queries. It is early days in the trial, but a recent on-line meeting went very well.

The trial will help us explore options to share good science with practitioners and to facilitate them learning from each other, even though separated by thousands of kilometres and administrative barriers. A challenge for us is finding a way to play this important role without it being a drain on resources.

If you're interested in joining the trial Forum, please get in touch.



Rabbit grazing coastal revegetation, Perth, WA. Image: Mike Norman, Friends of Sorrento Beach & Marmion Foreshore.



Easter Bilby's Friends - children's book

Our first Easter Bilby's Friends product, a children's book, is now well underway. It will be set in the southern Fleurieu Peninsula (SA) and tell the story of how different animals have been affected by rabbits and how people are coming to their aid. In developing the story we've been at pains to ensure it is well grounded in science (with help from local ecologists) and that it reflects the work of local community groups, NRM bodies and environmental NGOs.

The planning, research and consultation required has been boosted by Vicki Linton coming onboard as a voluntary project officer, bringing a wealth of experience in rabbit control, environmental conservation, and liaison with rural communities. While our first book is on track for release in early 2024, Vicki is already scoping out a follow-up; a story set in south-west WA for release in 2025.



Vicki Linton (voluntary project officer), Carolyn Schultz (Cape Jervis Coastal Community Group), Kristin Martin (author) and Bianca Richardson (illustrator) during a 'familiarisation' field trip, with rabbit-free Kangaroo Island in the background.

Rabbit News & Views

Stories about and from Foundation members and partners.

Calicivirus trials - Wardang Island

What is it like being at the cutting edge of biocontrol research - especially when it doesn't go to plan; no matter how detailed and thorough the plans are? Former Chair and long time stalwart of Rabbit-Free Australia, Nicholas Newland, reflects on his time as Program Coordinator for the rabbit calicivirus research program that commenced in 1994, including field trials on Wardang Island, SA.

See '<u>The Rabbit Calicivirus Story</u>' for a brave tale and personal insights into the introduction of RHDV to Australia - an event that has been referred to as one of THE single most effective environmental initiatives of our time.





Researchers, Scott Jennings, Chris Davey, Brian Cooke & Jonathan Hardy, on Wardang Island.

Find the story: Science communication

Bush Heritage Australia does an amazing job of protecting ecosystems and wildlife across the nation - and an equally good job of communicating their work and impact to diverse audiences. Their News & Media Centre is an online library full of interesting stories and information.

Impressed by the quality of work we asked the Bush Heritage Communications Team about their secrets to success, and were delighted when Bee Stephens agreed to share them with us. Bee's collation of tips is an entertaining read and guide for anyone interested in science communication. Delivering fact-based stories that engage and inform, in ways that are accessible to all, are incredibly important skills for modern organisations. See 'Find the story in facts' for more information and 'how to' tips.



Pictures bring the story to life and help immerse readers within an environment.

Image: Eliza Herbert

Darling Downs-Moreton Rabbit Board. Success is invisible.

'Success is invisible', observes Craig Magnussen (CEO) in a summary of the Darling Downs-Moreton Rabbit Board in SE Queensland.



The Board maintains a 130 year old rabbit-proof fence around some of the State's premier agricultural land, and backs that up by ensuring landholders effectively control rabbits; with an emphasis on removing warrens and other harbour to prevent breeding.

Communicating the need for rabbit control and research into biocontrols is another priority, and the Board is using 'contemporary strategic communication' to get the messaging right for increasingly urbanised communities.

For more information on the Board and Craig's observations, many of which ring true for any rabbit control program, anywhere, see '<u>Success is invisible</u>'.



Ongoing surveillance, repair and replacement maintain the effectiveness of the Darling Downs-Moreton Rabbit Fence.

Rabbit, cat & fox control. A springboard to recovery.

The 'unholy trinity' of rabbits, feral cats and foxes are a collective threat to many of Australia's most at-risk native animals and ecosystems. A Blog by the National Feral Cat & Fox Management Coordinator (Gill Basnett) and Rabbit-Free Australia's Executive Officer (Peter Day) sets out a case for integrated regional control programs where:

- Rabbits, feral cats and foxes are managed together,
- Actions are coordinated across property boundaries, regardless of tenure and ownership, and
- There is on-going support, monitoring and assistance to the land managers involved.

See their Blog Post in Rabbit-Free Australia's <u>Member's Lounge</u>, and the Fox and Cat control stories in Snippets below.



Snippets

A smorgasbord of news. Please follow the links to the original source.

'Cooke's Index' gets thumbs-up to score rabbit abundance

A recent paper by <u>Delibes-Mateos et.al</u>. concludes that a method of determining rabbit abundance from a survey of rabbit droppings (pellets) developed by <u>Cooke and McPhee (2007)</u> is as valid in Spain as it is in Australia, proving to be simple, inexpensive and accurate.

Rabbit abundance and density estimate (Cooke B et.al. 2014)			
Rabbit dung sighted in a 15 minute walking survey	Rabbit abundance score	Approximate density (Rabbits/ha)	
None found.	0	0	
Isolated pellets and pellets in clumps of 5-10, at least 10 metres apart.	1	0.5	
Scattered pellets and pellets in clumps, less than 10 metres apart.	2	1,	
Pellets are common, in larger clumps and occasional buck-heaps, in half the area surveyed.	3	2	
Pellets are abundant, in large clumps and buck-heaps; though not across the entire area surveyed.	4	5	
Pellets are very abundant, and buck-heaps are always apparent.	5	10 or more	

Modified version of Cooke's dung scoring chart. Source Rabbit-Free Australia.

Pest animal monitoring videos

Ag Vic have released a 'how to' video on monitoring rabbits, foxes and feral pigs to assess numbers and the effectiveness of control programs, including camera traps, spotlighting, and activity plots (animal tracks). See here for more information.

Golden Plains Shire. Integrated rabbit control

A good example of Local Government leading an integrated rabbit control program comes from the **Golden Plains Shire**, between Geelong and Ballarat in Victoria. They follow-up K5 releases with warren destruction and fumigation. For more information, see here.

Single species management vs ecosystem management

Ecologist **Charley Krebs** uses NZ as an example to promote 'a stable system of ecosystem management' as more likely to succeed in **vertebrate pest control** than a focus on single species. See here to read the Blog.

Fox control can increase cat numbers

A Journal of Applied Ecology article suggests fox control can lead to increases in cat numbers - more reason to promote integrated rabbit, fox and cat control. See the article here.

Control rabbits first, then cats



Landscape recovery on **Macquarie Island** shows the importance of controlling rabbits first, then feral cats. Focusing on cats first led to a boom in rabbit and rat numbers. Eliminating rabbits, rats and mice paved the way for predator removal and triggered a revival in vegetative habitat for other animal species. Access a couple of articles **here**.

Predator awareness can fade

Native species can lose anti-predator traits when living in sanctuaries, making them less suitable for release outside of safe havens, according to work from WA (Natasha Harrison et.al) and observations from Kath Tuft (Arid Recovery, SA). See here for Kath's Linked-in Post, or here for the Harrison et.al research paper in Biological Conservation.

Understanding mammal extinctions

Combining historic data and ecological models is helping to understand and explain mammal extinction in Australia - and pose questions for future efforts to avoid more species becoming 'threatened'. For more information see the Journal of Biogeography, here.

Insect informers detect vertebrate pests

An article in The Conversation reports that extracts from **blood-sucking insects can reveal the DNA of their hosts**; potentially being another form of detecting cryptic species. For more information, see **here**.

Genome partnership: Pests & weeds

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Feedback

Any thoughts on this Newsletter, technical difficulties with links, things you'd like to see in future editions, or any matters to do with the Foundation - please let us know.

Meet some of our volunteers



Foundation for Rabbit-Free Australia relies on a raft of volunteers for all sorts of jobs and assistance, including serving on our Committee. We like how it enables the bulk of our income to be channelled to the aims of the organisation and we enjoy the culture it instills within the Foundation. Read on to meet a few of our cherished volunteers.

Chris Bourke

ROLE: Post Mistress. Weekly collection and redirection of mail from our PO Box.



SUPER POWER: Lives near the PO and is happy to help out.

WHY: I have little choice – I'm the Executive Officer's sister; and with a farming background I understand and believe in the what the Foundation is doing.

Amy Iannella

ROLE: Committee member, and voluntary technical expert for Wild Apricot (our membership services software) – without which we would never have even started down the web-based path we are now on.



SUPER POWER: Understands IT and is brave in tackling new programs.

WHY: I want to keep in the loop while I'm on a maternity career break and I get a kick out of being useful.



Bruce Munday

ROLE: Writing content, especially case studies, for Newsletters and contributing to Blogs and Forums. Author of Those Wild Rabbits – How they shaped Australia

SUPER POWER: A great knowledge of rabbit history, a rare talent in helping people tell their stories, and a curiosity-driven interest in continual learning.

WHY: The stories behind Australia's rabbit experience need to be told: the lessons (painfully) learned and the most effective ways forward.

If you, a friend, family member or associate has a special power to share with the Foundation, please get in touch. We have all sorts of plans where a volunteer could help and would love to hear from you. Examples are social media management, fundraising, business partnerships development, science writing, membership engagement, research/project administration and coordination.





Brian Cooke

ROLE: Patron, who exceeds all expectations in communication (e.g. giving presentations and writing Blogs), regularly reviewing technical documents and providing references, and all-round guidance.

SUPER POWER: An unmatched knowledge of rabbits and bio-controls, and a preparedness to lead considerate conversations of matters regardless of contention.

WHY: I have had well over 50 years experience in managing pest rabbits and I know that persistent, long-term study and application of new ideas has paid off economically and environmentally.



Vicki Linton

ROLE: Project officer, helping develop the Easter Bilby's Friends concept in liaison with ecologists and community groups, preparation of background materials, and part of the 'creatives' team developing stories for children and reference material for students and adults.



SUPER POWER: Expertise in pest control, environmental management, conservation, and community consultation – backed by a keen mind and easy rapport with virtually everyone.

WHY: When I retired, I didn't miss the work, but I missed the people. Volunteering with Rabbit-Free Australia gives me a new way to (re)connect with like-minded people, and continue my longstanding interest in rabbit control (and pests in general). Plus Peter is both persuasive and persistent!

Amy Cotton

ROLE: Website manager through her company 'Cotton Consulting' and all-round IT problem solver providing service way above what is expected, enabling our advances in on-line information and service provision that is crucial to the future of the Foundation



SUPER POWER: Keeping complicated IT simple, and tolerance and patience beyond belief in working with aged, IT-illiterate executives.

WHY: Rabbit-Free Australia delivers an important message in support for the Australian natural environment, that needs to be shared far and wide.

William Morgan

ROLE: Voluntary Treasurer and Public Officer for twenty years, guiding the steady growth of the Foundation's financial affairs over that time.



SUPER POWER: Sound business acumen and a tremendous memory of the Foundation's history to draw upon.

WHY: Volunteering has been personally rewarding and I think that it is important for people to offer their expertise in areas that the government, institutions and politicians short sightedly put-aside.

Anne Burgi

ROLE: Nationally recognised as a 'go to' sub-editor, Anne provides her expertise in editing, design and layout of publications whenever requested, ensuring key documents have a professional style



SUPER POWER: A love of the English language, and superb skills in sub-editing and helping authors get their stories straight, backed up by a keen eye for layouts that are easy to read.

WHY: Because Peter is a great persuader! And because Rabbit-Free Australia has important messages that need to be kept in the public arena.

More information about Rabbit-Free Australia

ABN: 96 353 157 496

Post: PO Box 145, Collinswood, South Australia 5081 Email: admin@rabbitfreeaustralia.org.au Web: www.rabbitfreeaustralia.org.au Follow us on:

- Facebook (@RabbitFreeAustralia)
- Twitter (EastaBilby).



Bilbies Not Bunnies



Membership Options: Foundation for Rabbit-Free Australia Choose an option to suit your needs.

Individual: Student.

Any school or tertiary student may join as a full member at no annual cost. To maintain student membership they will need to confirm they are still a student on an annual basis, in response to an automated email. Remaining a member once study is completed simply requires the selection of an alternative membership level, via your membership account at the on-line membership portal.

Individual: Yearly renewal.

A general membership, with alternative annual payment options; credit card, Electronic Funds Transfer, or cheque. All members receive an invoice as their fees become due.

Individual: Auto-renewal.

A general membership, with automatic payment from your designated credit card as annual fees become due. This option suits those wishing to remain long term members and not be bothered with the annual process of bill-payment.

Individual: 5 year.

A general membership, running for five years. This option is for those seeking a long term membership, and wanting the range of payment options; credit card, Electronic Funds Transfer, or cheque. A small discount is offered in recognition of lower administration costs.

Family.

A special form of general membership for couples, or couples with children or grandchildren they would like enrolled as members. It suits couples (providing a discount and avoiding having to pay two separate bills) and is a way to introduce students to the Foundation. It is operated as a 'bundle' by one of the adults who registers the children.

Corporate.

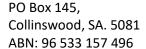
The Corporate membership option provides companies the opportunity to show their support for Rabbit-Free Australia and be part of the networks therein. Corporate members nominate an individual to act on their behalf and receive all correspondence and Newsletters etc.

Groups: Up to 3, or Up to 5.

The group option is available to any 'group' of people. The membership is initiated as a 'bundle' by an individual (the 'administrator'), who then selects the other individuals to be part of the group. The administrator can change the composition of the group at any time, allowing people to leave or join as circumstances change. The option suits community organisations, NGOs, government agencies, or even companies wanting to enrol more than one member. Every member of the group ('bundle') is a full general member with voting rights and receives their personal copy of Newsletters and event invitations.

The group options provide a discount for multiple memberships.

If you ever wish to change your membership, it can be easily done through your account and the on-line membership portal. If further assistance is required, please contact the Administration Officer; details below.





I went to the University of Adelaide in the 1990s to do a Masters degree in Environmental Studies part-time while still working full-time. While it was demanding, I felt that a Diploma in Agriculture followed by a post-graduate Diploma in Extension at Hawkesbury College in NSW in the 1990s was inadequate for what I wanted to do.

A job as Program Coordinator came up for the assessment and potential introduction of a specific virus to do more about Australia's rabbit problem, which I knew something about. I had spent 2-3 years working on rabbits in 1971 as a member of what then was called the Vermin Control Branch in the SA Department of Lands. Little did I know what I had taken on when stepping into the coordinator's role.

The Commonwealth Government, all State and Territory Governments and the Government of New Zealand were all involved and all had their own legislation that had to be dealt with. As I recall, there were something like 48 pieces of legislation that required attention! A whole book could be written just on the legal framework at that time!

The exercise started in 1994 at the CSIRO Australian Animal Health Laboratory (AAHL) at Geelong, where the RHD (Rabbit Haemorrhagic Disease) virus had been imported from China under strict quarantine.

In that highly secure and earthquake-proof location the virus was tested in every way, including ensuring that it was specific to rabbits only. This process took years. I spent a lot of time there and also in Canberra, as the CSIRO Chief of Wildlife and Ecology located at Gungahlin was chairman of a Proponent Committee.

The Meat Research Corporation (now Meat and Livestock Australia) in Sydney was the banker and controller of the budget, which was several million dollars collectively provided by all governments.

A lot was at stake.

I learnt much about science, particularly virology, people and the enormous difficulty of bringing to Australia a new and potentially dangerous pathogenic organism about which too little was known.

We, which really means lead scientist Dr Brian Cooke, had to field test this virus under strict quarantine protocols. After detailed assessment of the options, Wardang Island in Spencer Gulf, South Australia was selected. It was Aboriginal land and I had detailed negotiations with the Point Pearce community, which was a test in itself. I organised private plane flights to the island to save time and the short airstrip on the island was not a lot of fun to rehabilitate and land on.



Researchers and technicians, Wardang Island.



Notwithstanding enormously complicated quarantine protocols set by the Commonwealth, the virus escaped for reasons unknown at the time to the mainland and was most effective in killing millions of rabbits. We then had to mitigate the perceived threat to the community at large – including dogs and cats and even children – a task that largely fell to me. As can be imagined, the media had a field day. It was several years before we could confidently say that transmission was by flies – no doubt the vector behind the initial escape from Wardang.

Among other things I had death threats, which ended up with a 24-hour watch on the family house. For some obscure reason, I was accused of treason from someone in Western Australia (the letter from Buckingham Palace ended up on my desk via the Premier's office).

I had press conferences with banks of microphones, the animal welfare lobby was after my blood and the list goes on.

Yet the virus worked for some years (1995 to about 2005) killing an estimated 120 million rabbits, for which Brian Cooke can take much of the credit. Ironically, it possibly would never have got formal approval for planned release from the Commonwealth Government.

I am glad I took on the task as it took me to locations to which I may never have visited, including remote Aboriginal communities. It taught me about the limitations of scientists trying to 'sell' something that science had discovered, but scientists did not know or really wanted to know how to deal with. The experience served me in good stead for the remainder of my working life, for which I am grateful. The downside was pressure on my family, which caused me some concern.

There was also a perception that I had 'done it', which is not right in my view. Without the work of scientists such as Doctors Cor Lenghaus, Harvey Westbury, particularly Brian Cooke, Tony Robinson and others, it would not have happened the way it did.



Scott Jennings, Chris Davey, Brian Cooke & Jonathan Hardy on Wardang Island

Looking back on what was an adventure in the public sector, there are many aspects of such an event which cannot be done justice in this abbreviated account. As I said earlier, there is much that could be recounted and a great story it would be. One day it might surface but not here.

I recall a perceptive although somewhat direct remark made many years ago by Dr Brian Coman from Victoria when he asserted that 'rabbits will be pissing on your grave'. How true that statement is in 2023. There is still a long way to go, although good science combined with persistence may come up with something that fixes the problem. I certainly hope so for the sake of the environment as much as for primary industry.

The role of the Foundation for Rabbit-Free Australia, and the commitment and interest among younger scientists, cannot be emphasised enough.



Finding the story in fact: Science communication to save nature.

Bee Stephens



A Night Parrot emerges from the spinifex at Pullen Pullen Reserve, Maiawali Country, Queensland. Image Nicholas Leseberg

If a Night Parrot calls out amongst the spinifex at Bush Heritage's Pullen Pullen Reserve, Queensland, Maiawali Country, and an ecologist isn't around to hear, did it make a sound?

An adaptation of a curious question. This article will not attempt to answer what has long stumped various intellects, scientists, philosophers, the public and many a curious bushwalker. It will, however, emphasise the importance of conservation science (the Night Parrot) and the need to effectively communicate this work and its outcomes (the call) to our wider world (the ecologist, Bush Heritage and beyond).

Nature continues to throw us urgent reminders for its protection and offer warning signs of life in a climate-disrupted future. In March this year, the Intergovernmental Panel on Climate Change (IPCC) released their Sixth Assessment Report. Leading climate scientists are warning we are operating in a "rapidly closing window of opportunity to secure a livable and sustainable future for all". But together, with action, we have the ability to lower our emissions and keep warming below two degrees for the remainder of the century. The limit on earth's increasing temperature that scientists advise will protect the planet from the impacts of a dramatically changed climate. To do this, we'll need everyone on board. Good communication is one of the strongest tools available to engage all of humanity in nature's plight.



Leading conservation not-for-profit Bush Heritage relies on quality science communications to engage its donors and supporters. Their incredibly generous donations (both in-kind and financial) allow the organisation to heal more than 1.2 million hectares of land across the continent and safeguard it for future generations. A collection of the organisation's storytellers collaborated to provide Rabbit-Free Australia's readers with a guide on crafting compelling science communication that sticks — and will help save our home planet.

Listen for the idea

The confirmation of genetic diversity in translocated Phascogales, the return of cultural burns to Wiradjuri Country at Tarcutta Hills Reserve and the use of ecoacoustics to monitor ecosystem health – there are story opportunities aplenty at Bush Heritage. A communicator's role is to listen and chase those that will spark the most interest from the organisation's supporters. This means networking, relationship building and having a yarn with open ears!

Make a plan

With an idea in hand, it's time to plan. Apart from foundational content planning elements such as understanding your audience and deciding where to publish your content, to elicit a desired response from your audience, it's key to map their journey of the story. Bush Heritage's former communications team leader Eliza Herbert, offers advice on setting the narrative:

"It's our job to make these places and stories sing. Once I've identified the audience, format, and angle, I think about how best to deliver the message to the reader. This could be through a narrative structure that grounds the person in place; it could start in the moment and evolve in real-time. Or, if it is rich in scientific details, I might segment the article and guide the reader through the use of subheadings. Our biggest challenge is that there can be too much to include, so once I've worked out what the central question is, I use structure to create clarity and deliver the answer."



Bush Heritage Ecologist Daniella Teixeira installs an acoustic monitor at Yourka Reserve, Jirrbal & Warrunga Country,
Queensland. Image: Eliza Herbert



Bolster with research

With a narrative planned, we then ground the story in science. This means absorbing research papers, blogs, articles, videos, podcasts and reaching out to relevant stakeholders to become the story's expert.

"As a science communicator, I believe in the power of meticulous research to deliver accurate, reliable, and impactful narratives. Understanding the full picture is key to delivering the right message," says Will Sacre, Bush Heritage Content Coordinator.

Add humanity to the data

Bush Heritage is an organisation driven by people. The landscape-scale conservation outcomes it delivers rely on the countless contributions made by staff, volunteers, partners and supporters. So, humans are extremely important to any Bush Heritage story. The inclusion of interviews and quotes from key stakeholders brings facts and numbers to life whilst deepening audience connection.

"Western scientists are often concerned with *removing* humanity from a story by distilling it into facts that are as objective as possible. As science communicators, I think part of our job is *restoring* that humanity to help people connect with these stories. And it's not hard to do – human stories are everywhere you look in science. They can be found in people's motivations, in their personal and career journeys, in their moments of surprise and awe and frustration (surely, moments that all scientists have experienced?). They're found in the ways that humans have shaped and cared for landscapes for tens of thousands of years, in the sounds and smells that an ecologist senses when they're out in the field. These are narratives we can all relate to, and which bring the facts and figures to life," advises Amelia Caddy, freelance writer and producer who regularly contributes to Bush Heritage's *Bushtracks* publication.

Take the audience into the bush

"I always want the reader to imagine being there in the scene I'm describing – in the desert; with the scientist; holding the cage door open as the bandicoot bounds away to freedom – whatever it is, your reader has to be right there in the scene to be ready to care enough to do something," says freelance environment, science and sustainability writer Bron Willis.

The following introduction is taken from her *Bushtracks* article 'Songs of the plains', it is an immersive example of employing visual imagery to increase audience connection and improve their memory of a story:

It's a couple of hours after dark and the bumps in the track bounce PhD student Saskia Gerhardy around in the ute as she peers down at her iPad. Driver and Bush Heritage Healthy Landscapes Manager Graeme Finlayson watches the headlights reveal the open plains of Boolcoomatta Reserve, on Adnyamathanha and Wilyakali Country in South Australia.

On one side of the ute is a mounted set of thermal binoculars and on the other, a spotlight. It's June 2022 and the first night of Saskia's sixth research trip here. She's holding her breath for a sighting of a bird that has occupied so many of her waking moments.





Bush Heritage former communications team leader Eliza Herbert and ecologist Justin McCann on Wurundjeri Country, Victoria.

Image: Daniel Hartley-Allen

Create flow and accessibility

We want the audience to enjoy a smooth ride as they move between complex concepts, figures, personalities and vivid descriptions. To improve content's fluidity, it's important to proof work, clarify language, ensure the story's timeline is consistent, sense-check arguments and make the content easy to understand.

Bush Heritage's Social Media and PR Manager Coco McGrath advises "The key to effective science communication, I think, is putting your audience at ease. Imagine you're having a conversation rather than delivering a lecture, and share information in an engaging, curious way."

For those equipped and willing, telling stories about nature and the people working for its protection is both a privilege and an important responsibility. Find more inspiration to create planet-saving content on Bush Heritage's blog, or by listening to the latest season of its podcast *Big Sky Country*: bushheritage.org.au/bigskycountry.

Prepared for Foundation for Rabbit-Free Australia, 2023.

By Bee Stephens, Communications Team, Bush Heritage Australia.



Preface

The Darling Downs-Moreton Rabbit Board (DDMRB) has been in existence in one form or another for 130 years. Our role in protecting Queensland's agricultural productivity and environmental values is as important today as it was in the 1890s.

So much of our productive and natural landscapes have changed since then, but the impacts of rabbits, or the threat of their resurgence, has remained constant. The rabbit fence has stood for 120 years, creating a physical and strategic barrier preventing the establishment of rabbits in Queensland at levels seen in the southern States. The introduction of biological controls have seen plague-like rabbit populations crash, only to once again flourish thanks to the unique ecology of the rabbit and its ability to breed, adapt and survive. We have learnt that the most effective way to control rabbits is to destroy their warrens and remove their harbour. There is no silver bullet and we continue to educate and encourage land managers to adopt these best practice methods.

We know from scientific research that the fence continues to work and we know biological controls are vitally important. Similarly, a regulatory compliance framework that places responsibility on all land managers to control wild rabbits on their land, and that prohibits the ownership of pet rabbits, is critical.

These three factors hold the key to ensuring the impacts of rabbits are supressed in the DDMRB area and beyond in Queensland.

- 1. The rabbit fence must be maintained in a rabbit proof condition, in its current extent, noting its importance where rabbit pressure is high and its strategic value as an insurance policy where rabbit pressure is currently low, but would see a resurgence should any or all of these other factors be allowed to decline.
- 2. Continued funding into biological control research must be assured. History tells us that biocontrols can work extremely well, but also that rabbits have the capacity to overcome them.
- 3. Continued support from all levels of government is needed to ensure a contemporary regulatory compliance framework is in place. Land managers, regardless of the tenure of their land must be held to account and assisted to remove rabbits where they exist. This must be backed by best practice control measures. The risks posed by ownership of pet rabbits must be acknowledged and countered by unwavering support for the prohibition on pet rabbit ownership.

Like the Boards that have gone before us, we are committed to ensuring the impacts of rabbits in South East Queensland and beyond are kept to a minimum and that we do so through the effective delivery of operational and strategic plans. We acknowledge the support of our partner local governments and strive to provide value for money in our operations, and transparency and collaboration in our approach. The rabbit is arguably Australia's most damaging invasive pest and effective partnerships are needed to continue to successfully manage its impacts.

Cr Janice Holstein, Chair, Darling Downs-Moreton Rabbit Board



Junction of the Rabbit & Wild Dog Barrier Fences. Image DDMRB



Creation of the Darling Downs-Moreton Rabbit Board

When rabbits first reached Queensland from the southern States in the 1880s, a fence was quickly constructed along the New South Wales and South Australian borders in an attempt to keep them out. Unfortunately, the rabbits had already invaded some districts before the fence was complete. Some of the district rabbit boards that had been established in the 1890s (Figure 1) had inadequate financial and technical resources to cope with the problem.

In 1930, all existing rabbit boards were abolished except for Leichhardt, Darling Downs and Moreton. In 1963 the Leichhardt Rabbit Board closed and the Darling Downs Rabbit Board took over their 80 km fence. In 1964, the two remaining boards merged to become the Darling Downs–Moreton Rabbit Board.

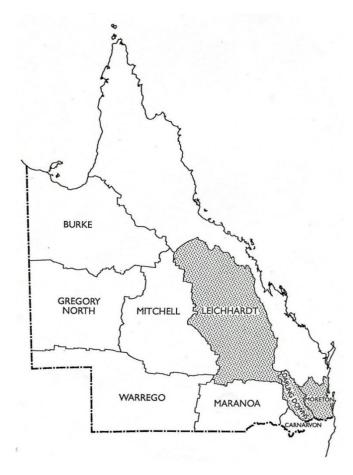


Figure 1 Rabbit Board Districts

Our Role

The Darling Downs-Moreton Rabbit Board (DDMRB) is an *Invasive Animal Board* established under the *Biosecurity Act 2014* and is responsible for managing European rabbits in the rabbit district (Figure 2) so as to minimise their number and impact.

The DDMRB employs 15 staff to provide a rabbit control and compliance service to 8 local governments and their rate payers within the 28,000 km² rabbit district (the board's operational area) of south east Queensland. The delivery of this service is achieved through the maintenance and upgrade of the 555km rabbit-proof fence, and the provision of expertise and technical information to assist landholders to control rabbits on their land. Approximately 40% of the rabbit fence is now constructed to 'dog height'; providing a dual-purpose fence that is a highly strategic barrier to wild dog dispersal.



Our vision is to enable our productive and natural landscapes and our residential and recreational spaces to be free from the impacts of rabbits.

Our mission is to control the impacts of rabbits by efficiently managing our assets and effectively communicating with our stakeholders.

The DDMRB plays a strategic role in reducing the spread of rabbits into and within Queensland by maintaining the rabbit fence and educating and assisting land managers to remove rabbits from their land. Our objectives are:

- 1. To successfully suppress the wider environmental effects of rabbits;
- 2. Communicate the value of the organisation that encourages consistent support from landholders, local government and other stakeholders; and,
- 3. To maintain the infrastructure which has successfully mitigated the environmental and economic impact of rabbits for over 130 years.

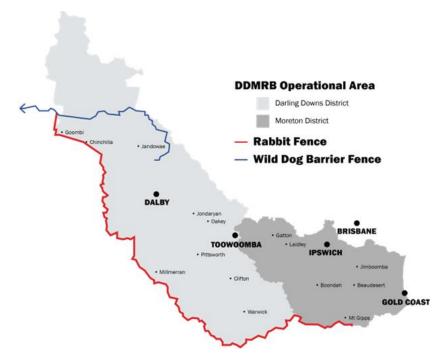


Figure 2 Rabbit Fence and DDMRB Operational Area

The DDMRB is a statutory body of the Queensland Government under the portfolio of the Minister for Agricultural Industry Development and Fisheries and Minister for Rural Communities. The DDMRB's operations are fully funded by local governments.

The DDMRB area is a significant part of Australia encompassing a substantially sized, highly productive agricultural area that is ideal for rabbits, but has not yet suffered the impact of large numbers of rabbits. The value of horticultural and cereal crop production in the area exceeds one billion dollars per annum. Outside the DDMRB area, plants and animals experienced incredibly high grazing pressure from rabbits, particularly up until myxomatosis arrived. These impacts continue today, albeit to a lesser extent due to the effectiveness to date of biological controls.

Fox and feral cat numbers are generally highest where there are rabbits and these introduced predators have caused considerable damage to native small mammal populations. By keeping rabbits out, the DDMRB has probably protected native animals from introduced predators. We suspect there are more healthy populations of native mammals in the DDMRB area, and to the north east of the area, because rabbits have been prevented from establishing.



The value to agriculture of keeping rabbits out is considerable and has been estimated to be hundreds of millions of dollars per year. Although rabbit infestations are discovered within the DDMRB area they have not been allowed to properly establish large warren systems. Without warren systems rabbit populations are unlikely to survive.

DDMRB's role can be considered one of prevention, as it relates to the economics of the biosecurity invasion curve. The extent to which rabbits are established in Queensland is very low when compared to their potential distribution. Current impacts are therefore very low when compared to the impacts that would be felt should rabbits establish in Queensland to potential levels. The return on investment in preventative rabbit control is high.



Gates in the Qld/NSW Border section of the Fence were 'check points' during Covid restrictions. Image: DDMRB

Powers and responsibilities

Rabbits are restricted animals (Categories 3, 4, 5 and 6) in Queensland under the Biosecurity Act 2014.

The Act, and the *Biosecurity Regulation 2016* provide powers for the management of declared pests in Queensland. Specific provisions include powers for the DDMRB to maintain the rabbit fence, and to appoint authorised persons who in turn have the powers to inspect land, seize unlawfully kept rabbits, and require landholders to undertake rabbit control.

Core Principles

- DDMRB is in the business of prevention; the biosecurity approach with the greatest economic return
- Wild or domestic European rabbits remain a major threat to the Australian economy and environment. Continued enforcement of compliance with legislation requiring their removal from land, regardless of tenure, and their ownership as pets is critical.
- The DDMRB's operational area is the premier agricultural region in Queensland.
- The ongoing commitment of DDMRB, it's partners and other stakeholders is essential to
 protecting south east Queensland and beyond from the impacts of rabbits. This includes
 continued funding for research into biological controls.
- The rabbit fence remains a vital asset in providing a physical barrier to the incursion of rabbits into south east Queensland and beyond. It is also an important strategic barrier to wild dogs and other invasive animals.
- The DDMRB recognises that funding is provided by ratepayers through their local governments and as such we strive to provide value for money in our operations.
- The DDMRB is committed to environmentally sustainable practices and has adopted an Environmental Sustainability Policy.



Reflections

One of the most challenging aspects for the DDMRB is that success is invisible. That is, the fence, coupled with our compliance efforts and those of our partners, together with a robust regulatory framework, have all served to prevent rabbits from establishing in Queensland to their potential. People either forget or never knew in the first place about the devastating impacts caused by widespread, high-density rabbit populations. On face value, maintaining a barrier fence seems an antiquated solution to a problem that has never reached its potential here. We constantly have to justify our existence and jostle for resources in the contemporary biosecurity approach adopted by governments. That said, the resurgence of wild dog exclusion fencing across the rangelands goes to show that everything old is new again!

Related to this is the challenge to cut through the knowledge gap and have our message heard by an increasingly urbanised community of stakeholders. People tell us, "There are rabbits everywhere" because they see the same two rabbits (or hares!) in the same spot every day. They ask, "Why do we still maintain the fence?" "Why can't I keep a pet rabbit?". It is human nature to try and shape a complex issue into a simple one and explaining the complexities of rabbit ecology, impacts and control to an audience that often isn't listening is exhausting. But, we know what we do works because we have an evidence base, and so we persevere! We are beginning to understand how contemporary, strategic communications can augment the thousands of one-on-one interactions our staff have with land managers every year, and we are seeing positive results in terms of engagement and behaviour change.

More Information

More information can be found by visiting DDMRB's web site at www.ddmrb.org.au.

DDMRB has recently published a book on its 130 year history and of rabbits in Australia. *Beyond the Fence: Darling Downs-Moreton Rabbit Board 1892-2022* is a thoroughly researched and beautifully illustrated book that offers a fascinating account of rabbits in Australia, how they helped shape the nation, as well as the 130-year history of the DDMRB. It is available for purchase online at www.ddmrb.org.au/beyond-the-fence/.

Prepared for Foundation for Rabbit-Free Australia. By Craig Magnussen, CEO, Darling Downs-Moreton Rabbit Board. 2023.



Wayne Russell and Mark Ridge inspecting fence damage in World Heritage listed rainforest. Image: DDMRB

