

ABRIDGED NEWSLETTER - CONTENT

- [AGM & Committee Nominations.](#)
- [Rabbit-Free Research Update.](#)
- [Member Profile: The Greenfield Family.](#)
- [Feral Cat Inquiry: Foundation Submission.](#)
- [Adaptive Morphology & the Evolution of Rabbits.](#)
- [RHDV2: A Rabbit Conundrum in North America.](#)
- [Biossecurity SA: Update.](#)
- [From the Archives: 'What is eating Australia?' \(Compassionate conservation\).](#)
- [Communication & Membership: Have your Say.](#)
- [Latest News from the Website.](#)
- [New Members.](#)

AGM & Committee Nominations

Notice of Meeting

The Foundation's Annual General Meeting will be held on November 19th, at the Santos Convention Centre (Adelaide Zoo). An invitation and Agenda is enclosed

All members are welcome, but due to COVID-19 restrictions it is important that everyone wishing to attend does let us know as numbers will be capped, and the venue organised to enable social distancing. None-the-less we hope to accommodate everyone wanting to come, so please do if you can. Meeting papers will be distributed to all registered attendees prior to the meeting and it promises to be an interesting opportunity to catch-up with fellow members.

Alister Haigh (CEO, Haigh's Chocolates) will be our guest speaker at the AGM, talking on 'The Easter Bilby Story'.

Haigh's Chocolates made the risky decision to gradually phase out chocolate Easter Bunnies after introducing the Easter Bilby in 1993 and have been proud proponents ever since. Their efforts in marketing the Easter Bilby have been a dominant factor in spreading the message about a need to control rabbits in order to reclaim Australian landscapes for native animals. Haigh's also maintain an enduring relationship with Rabbit-Free Australia, which is highly valued by the Foundation.

Alister will share the insights and experiences Haigh's have enjoyed through their promotion of the Easter Bilby.

Bruce Munday, author of '[Those Wild Rabbits. How they shaped Australia.](#)', will also be present with copies of his book available for purchase.

Committee Nominations

The AGM will also mark some transition in committee membership, with two members (Nicholas Newland and Dean Rasheed) retiring having served five consecutive terms, and Carolyn Ireland nominated as a new member. If you would like to nominate a Foundation member to join the committee please use the enclosed form and return it to the

[Administration Officer](#) by Friday, October 30th. A brief biography of Carolyn, is appended.

Rabbit-Free Research Update

This year, the Foundation committed to funding two projects: attendance at a national conference and some preliminary investigations into gene-drive technology. Unfortunately, due to COVID-19 restrictions both projects are on hold. Hopefully both will get underway in 2021. A call for new projects will be launched at this year's AGM.

Member Profile: The Greenfield Family

Keith Greenfield is credited with first raising the need for a foundation to support rabbit research and is a long-standing supporter of Rabbit-Free Australia.

The Greenfield family have been on Billa Kalina station, north west of Lake Torrens, for several generations, and the family has been active in the region since the early days of pastoralism in South Australia. Rabbits have been a constant element in their story, and are still an issue today for Keith's son, Colin.

Keith has recorded an amazing history of the Greenfields and their battles against rabbits, of the comings and goings of biological controls, and of the efforts still required to contain rabbits in pastoral country. The full story is appended

Feral Cat Inquiry: Foundation submission

Foundation for Rabbit-Free Australia was one of over a hundred organisations and individuals to make a submission to the 'Inquiry into the problem of feral and domestic cats in Australia', conducted by the Standing Committee on the Environment and Energy. The issue was referred to the House of Representatives committee by the Minister for the Environment

The Foundation pointed to research showing that rabbit control was one the most effective means to control feral cats and contain the harm they cause to many native animals. It also encouraged support for on-ground rabbit control and investments into bio-controls for rabbits as part of any programs to control feral cats. To see all submissions, including the Foundation's (No. 52), go to www.aph.gov.au/Parliamentary_Business/Committees/House/Environment_and_Energy.

Adaptive Morphology & the Evolution of Rabbits

Dr Emma Sherratt, an evolutionary biologist from the University of Adelaide is studying how the morphology of invasive rabbits and hares in Australia is evolving, to gain more insight into features that seem critical to their survival. It is part of a 'know your enemy' strategy that may help highlight any vulnerabilities.

Emma made a intriguing presentation about her work to a recent Foundation committee meeting. A summary of her adaptive morphology project is appended.

RHDV2: A Rabbit Conundrum in North America

RHDV2 was first reported in Europe in 2010 and in Australia in 2015. It was first found in the United States of America in 2018 and now in 2020 is spreading rapidly, into Mexico as well, becoming a significant risk to species of rabbits and hares that are native to those countries.

The policy conundrum there arises from wanting to protect native species in the wild, as well as domesticated pets, show-rabbits, and rabbits commercially farmed for food – yet wild European rabbits are a pest. There are lessons in the story for Australia, as well as hope for the identification of new biological controls and even vaccines for application here. A summary of the conundrum and its implications for Australia is appended.

[Biosecurity SA Update](#)

With recent changes in South Australia introducing regional Landscape Boards, the Rabbit-Free Australia committee was pleased to hear an update at its last meeting from Brad Page (Principal Biosecurity Officer, Pest Animals, Biosecurity SA). Brad spoke on the roles of different agencies regarding rabbit control and research and how they are working together, and with the Centre for Invasive Species Solutions, under the new arrangements.

The Foundation recently asked the Hon David Littleproud MP (Federal Minister for Agriculture, Drought and Emergency Management) to ensure the government adequately recognised the importance of coordinated rabbit control programs and associated research through funding in their Established Pest Animals and Weed Management Pipeline.

Kandarp Patel, who now leads the rabbit control research projects for the Department of Primary Industries and Regions (SA) as follows.

1. Turretfield. Research at the long-term rabbit research site (>20 years) at Turretfield wherein rabbits are captured, marked, and released to better understand the epidemiology of various RHDV strains and their effect on rabbit populations.
2. RHDV2 challenge trials. Wild rabbits are trapped and challenged with various RHDV strains (including RHDV2) to assess RHDV2's interaction with other RHDVs and its potential to be registered as a new rabbit biocontrol agent.
3. National Rabbit Biocontrol Optimisation – SA. Coordinating the SA component of the 'National Rabbit Biocontrol Optimisation' program focusing on RHDV surveillance at a couple of sites in the Coorong National Park and Turretfield in SA. The tissue and blood sampling data generated from wild rabbits contribute to the national RHDV surveillance database focusing on optimising the use of available rabbit biocontrol agents.
4. Rabbit research laboratory supervision. Supervising the laboratory operations at the rabbit research laboratory. Samples associated with Turretfield rabbit research, RHDV2 challenge trials, and the national RHDV surveillance are processed and analysed for assessment of exposure to various RHDV strains.

[From the Archives: What is eating Australia?](#)

'Compassionate conservation' is a new term fostered to convey a philosophy that no animal should be harmed – even if it is a 'pest' and doing so will enable other species to survive. The issue goes further than caring for the welfare of an animal, raising questions about the ethics of rabbit control.

A recent paper by researchers from the University of Newcastle, argues that compassionate

conservation can be laden with bias for charismatic animals and ignores the pain and distress, including death, to animals suffering due to 'pest' species.

While given a new name, 'compassionate conservation', the issue is not really new. A mid 1990s paper by Dr Rob Morrison, former Chair of ARRF (now Foundation for Rabbit-Free Australia) eloquently dealt with the debates at that time, explaining a range of issues associated with ecosystems and why we need to remove exotic animals, such as rabbits, from them. His paper 'What is eating Australia?' is available at the Foundation's website as one of 'Bilby's Picks' in the Resources section.

Communication & Membership: Have Your Say

The Foundation is considering a number of options to help communicate with members and the general public. Changes to the website, more frequent Newsletters, moving to a new membership management package, and possibly convening a national forum about rabbits are all on the table for discussion.

Little things, like the 2020-21 membership sticker and some targeted invitations to former and prospective members, are also being trialed. Any feedback on the stickers and low-key membership drive, or suggestions for new members, will be welcomed.

One of the strengths of the Foundation is the tremendous support it enjoys from **volunteers**, but we are always on the look-out for new contributors. Skills such as graphic design, social media, marketing, event management, IT applications, on-line events and communication/multi-media technologies would all be useful.

Please '**have your say**'. If you have any ideas on how communication or membership could be improved, or if you, or an associate, might be interested in volunteering, please get in touch with the [Administration Officer](#).

Latest News from the Website

The 'Latest News' from the Rabbit-Free Australia websites includes stories on:

- [Search for the next rabbit bio-control](#) – A \$7.7 million investment by MLA to boost research into the next major rabbit bio-control for Australia.
- [Revamped Pest Website: Rabbit control guides](#) – Pestsmart have revamped their website with lots of practical advice on rabbit control.
- [Albatross breeding](#) – The chance of albatross breeding on Macquarie Island drops up to 66% when rabbits are abundant.
- [Tracking RHDV via Blowflies](#) – blowflies offer an additional way to monitor the extent of RHDV.
- Rabbits causing headaches - damaging [crops in WA](#) & widespread problems in the [Adelaide Hills](#).
- [Landline tells Myxo story](#) – how Dame Jean Macnamara helped make Myxomatosis the great success story of biological control and applied science.
- [Managing Invasive Species: impacts & indicators](#) – how to justify and evaluate pest control.

Appendices

Committee Nominee Profile – Dr Carolyn Ireland

Carolyn has a PhD in rangeland management and is a consultant botanist and rangeland ecologist. Her passion is integrated natural resource management, particularly in arid areas, and her work has included preparing environmental impact statements, community consultation, and providing water management advice.

Previous roles include:

- Chair (and previously a member), SA Dog Fence Board
- Sessional Commissioner, Environment Resources & Development Court of SA
- Member, SA Pastoral Board
- Member, SA Arid Lands NRM Board

Adaptive Morphology and the Evolution of Rabbits

Dr Emma Sherratt: Evolutionary Biologist, University of Adelaide

The June RFA committee meeting heard a fascinating online presentation from Dr Emma Sherratt, an Evolutionary Biologist at University of Adelaide. Emma's work traces the adaptive morphology and evolution of invasive species, her current project focusing on leporids (rabbits and hares) in Australia. This entails the statistical analysis of their form and structure so that we better understand how the animal functions and interacts with its environment – important knowledge if we are to control or eliminate a pest.

There is enormous diversity in form across the range of rabbit species around the world. Rabbits are (unfortunately) an iconic invasive species in Australia, but the same species (*Oryctolagus cuniculus*) is on the endangered list in their home countries (Portugal and Spain).

Australia provides a globally unique opportunity to compare and contrast two related species (rabbits and hares) that have been invasive in the same landscape at the same time. Hares have not spread as far from their introduction centres compared to rabbits, nor in such numbers, and are found only in eastern Australia.

The first element of Emma's project is to determine if rabbits and hares have changed in morphology in 170 years since introduced. This poses the question of whether the 'Australian' rabbit is now a different species to that first introduced; and hence whether we are now modelling the wrong animal. Rabbit skulls from the Adelaide Museum (dating back to 1888) form an important source of data for this comparison.

The second phase is to see if similar environments result in similar morphological changes in different areas. This phase will expand genetic sampling across Australia with assistance from Dr Amy Iannella and Dr David Peacock

Thirdly, the project will see if population diversity in Australia can help explain the radiation of ancestral leporids into 62 species around the world.

The project is important as it will help us 'know the enemy'. We do know that rabbits are adaptive in response to biological controls but it is important that we understand this adaptation.

In discussion, Committee members noted that hares were historically much more common than in recent times. Now, although in much lower numbers, hares seem to increase as rabbit numbers decline following biological control peaks.

Another observation was that while rabbits came from a dry, arid area of Europe and could live in a water-poor environment, there is little other similarity between the Iberian Peninsula and Australia. Furthermore, there is great diversity in environments in which rabbits are comfortable across Australia.

Appendices

Keith Greenfield – A family history of rabbit control

My family have been in the country west and north west of Lake Torrens in SA since the early days of European pastoralism, as employees of absentee lessees and then as owners in their own right.

It's a toss up who got there first, us or the rabbits.

In 1877 great uncle William Greenfield, with his boss John Phillips, didn't see any on a reconnaissance around the lake starting from Kanyaka south of Hawker.

The run of good seasons had convinced the government that much of the pastoral country from Quorn to Farina was suitable for farming and Kanyaka was one of the properties to be resumed. William was sent to open up country in the South Gap area where he would spend the rest of his life.

By 1895 his bosses had had enough of drought and bad prices, so took the government compensation for value of improvements and gave up their leases.

William's younger brother George (my grandfather) was his overseer at South Gap.

The place was their home so they formed a partnership and took up the lease in their own right. Hard work, frugal living, boom and bust, drought, dingos and rabbits were their lot for the rest of their lives.

They took on Purple Downs in 1901 and George moved there.

William died in 1922 and George in 1926 but William's descendants are still on South Gap and George's on Billa Kalina which his widow Edith bought in 1938. Her youngest son, Colin (my father) moved there in 1939 and was joined by his new wife Eunice Sanderson in 1940.

In 1951 Dad bought a Fiat crawler tractor for dam sinking but the very first job it did was to rip all the rabbit warrens within a mile of the house. My son Colin is still at it in targeted areas along with other conservation measures.

The big plague of the mid 1950s is still a vivid childhood memory. It seemed every acacia bush in every watercourse had a couple of blind holes at the base containing several skinny rabbits, as did every wattle bush or canegrass on every sand hill.

By September the weather had warmed up, they had cleaned out the feed and started to travel. Billa Kalina is outside the Dog Fence but it forms our western and southern boundary, so the south west corner formed a natural trap. The rabbits piled in the corner and died, but the tide kept coming, forming a ramp of carcasses for the late comers to hop over the fence.

The same thing happened at the homestead. Dad built a rabbit fence around the stock water trough, with trap funnels into it, and every morning us kids would slaughter the rabbits and cart the carcasses away. We never got more than 1200 a day because the piles in the corners made a ramp for the stronger ones to escape over.

We used a Willy's Jeep with trailer to cart the bodies away to a huge pile but had to start another one because the stench became too strong to get near our heap.

Despite Dad's best efforts they got into the homestead well. The first hint of a problem was pale grey, very dead rabbit smelling liquid with the odd bit of fur dribbling from the fowl house water tap. A lot of lime went down the well to cure the problem. Luckily we had rain-water tanks.

Then myxo arrived: end of plague. No more rabbit-induced instant drought.

Myxo bent the bunnies but didn't beat them; there was always a residual population to knock down regeneration of perennial vegetation. Boom years would bring on a rabbit population explosion before myxo and a dry spell would trim their numbers enough to prevent an old time plague, but as their immunity increased so did the problem.

Appendices

Perennial vegetation only germinates or comes away in a wet year; the trees, especially western myall, need a very big rainfall event and are slow growing but very long lived, eight hundred years being quite common.

Through the 1980s and 90s I was involved in the development of the Pastoral Act and subsequently on the Pastoral Board which is responsible for the long-term sustainable management of pastoral land. During this period I met many people whose commitment to land management was both genuine and practical.

At this time research was going on into revitalising myxo and the promising calicivirus. The problem is research is by nature a lengthy business and therefore expensive with no guarantee of success, which does not endear it to government funding.

Sometime in 1990 I suggested that a fund be set up from tax deductible donations to promote and support rabbit research. I was pleased that others agreed and they set about organizing such a fund which was launched in 1993, with some considerable donations.



Keith Greenfield, holding a steel-jawed rabbit trap - now converted to an alternative use – and showcasing a Rabbit-Free Australia (RFA) membership sticker.

Through the 1980s and 90s, as members of the Kingoonya Soil Board, we also did warren ripping trials over an extensive area and erected exclosures to measure and document the difference in vegetation between exclusion of livestock only, exclusion of livestock and rabbits, and access to everything.

Then in 1996, great rejoicing! Calici arrived. The effect was dramatic – in no time at all it looked like no rabbits. As it turned out hardly a rabbit, but unfortunately not no rabbits. The increase in vegetation on our country has been remarkable, dented only by the current very extended drought, but at least we can now destock and not leave the remnants to the rabbits.

We've ripped and blown up rabbit warrens, shot, gassed, poisoned, trapped, netted, spot lighted, dug rabbits out by hand and cursed rabbits but the only methods that are effective over South Australia's vast arid areas, much of which are virtually unoccupied, are biological.

The Foundation for Rabbit-Free Australia is most important as experience has shown we must keep funding rabbit research, even as we face the huge economic cost of the COVID19 virus.

Appendices

RHDV2 - a rabbit conundrum in north America

Rabbits around the world are kept as pets, for food production, or regarded as pests – creating a conundrum, according to an article in *The New Yorker*. The recent spread of RHDV2 in the United States of America has highlighted some of the challenges for policy makers there.

Rabbits and hares are members of the *Leporidae* family which, along with *Ochotonidae* (pikas), are members of the taxonomic order *Lagomorpha*. In the USA, there are a number of native animals that are Lagomorphs, which raises the prospect of disease transmission into native populations.

In March, 2020, some Leporids native to north America - jackrabbits (hares) and cottontails (rabbits) - came down with RHDV2 in south-west USA, further exacerbating tensions in rabbit policies. It has also spread into the northern states of Mexico where a number of the lagomorph species are endemic – i.e. found nowhere else in the world.

There are no native Lagomorphs in Australia, so the use of biological controls for rabbits is less contentious here. None-the-less, before any bio-control is introduced it is a requirement that an environmental risk assessment is undertaken. It would include matters like host-specificity and risk to non-target organisms. The process in Australia is likely to fall under federal and state legislation and for animals it may include several Acts, such as the Biological Control Act and the Environment Protection and Biodiversity Conservation Act.

The issues in north America are not immediately transferable to Australia, but they serve as a reminder of the importance of rigorous research to support the introduction of biological controls. Rabbit-Free Australia is mindful of these matters, and of the very long lead time to confidently work through the complexities. It continues to urge governments to fund such work and maintain important research sites, as well as funding projects incidental to the main effort.

Monitoring events in countries where species of Lagomorphs are important to the ecology, economy or social fabric, such as in north America, can lead to the early detection of possible biological controls potentially applicable to Australia, and the availability of vaccines for use by commercial rabbit farmers and pet owners.