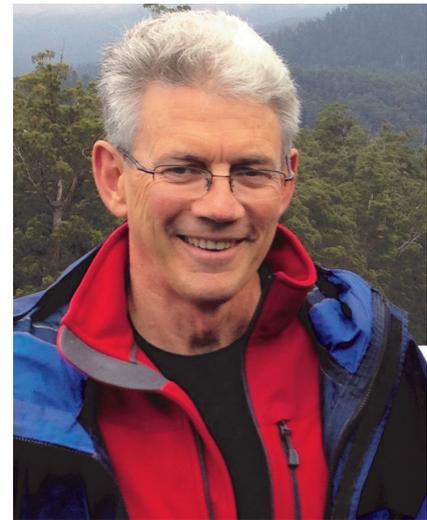


From the Chairman

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I have taken up the role of chair of RFA at an interesting moment in the history of seeking effective rabbit control in Australia. Efforts to control rabbits via a biological agent started in earnest in the late 19th Century, progressed on and off during the 20th Century through the introduction of the myxoma virus and the rabbit calicivirus. And here we are in the 21st Century about to release what we hope will be a more effective biological control agent - the Korean strain of the rabbit calicivirus or RHDV1-K5.

In conjunction with Wakefield Press, Bruce Munday, a long term member of RFA and keen historian, is about to release a very timely and highly anticipated book exploring the full history of rabbits in Australia. I commend this book to you all as entertaining, informative and highly relevant to anybody with an interest in rabbits and their impact on Australia. It is also a brilliant insight into the people and personalities that have shaped our response to the rabbit problem. (See full details within this newsletter.)



need a range of applied technologies and appropriate evaluation tools. And we need to maintain good communications so that people who can make a difference have the best information at their fingertips.

Much has been achieved in this direction but it is not time to lose focus. It is still early days in eliminating the impacts of rabbits on native species and agricultural lands.

From an RFA perspective, we believe the current events will open new opportunities for getting on top of persistent rabbit infestations and there are good prospects that the latest initiatives will provide many more landholders with practical means of implementing sustainable rabbit control.

However, it is appropriate to remind ourselves that we are engaged in the so called “arms race between biological control agents and the rabbit’s immune system”. Therefore we must immediately turn our attention to understanding the combined characteristics and effectiveness of the existing control technologies and to investigate the next biological control agent even before the effectiveness of the latest arrivals becomes apparent.

RFA encourages governments and industry bodies to fund research essential to achiev-

RFA Supported by:



Foundation for Rabbit-Free Australia Inc.

PO Box 145

Collinswood SA 5081

Tel: 0407 721 195

Email:

admin@rabbitfreeaustralia.org.au

Web: www.rabbitfreeaustralia.org.au

The latest release is planned for this autumn, facilitated by landholders and community groups at more than 600 sites across Australia. The release is managed by NSW DPI and supported by the Invasive Animal CRC on behalf of all jurisdictions and the land holding community. The Korean strain of the calicivirus is predicted to be far more effective in the temperate agricultural regions than previous strains. This initiative appears to be the best coordinated release of a biological control agent in the history of rabbit control in Australia.

Just to complicate matters a little, a completely distinct calicivirus with apparently virulent characteristics has also recently arrived in Australia from an as yet unknown source(s). This virus appears to be lethal across a range of environments, may also affect hares and based on experience in Europe, may displace RHDV1 viruses in some locations.

While RFA has a vision to eradicate rabbits our initial focus needs to be an Australia free from the worst impacts of rabbits. To do this, we need long-term strategies. We

RHDV Update March 2017

Release of the new Korean strain of RHDV

Rabbit control in Australia has been given a new biocontrol from the RHD Boost program of the Invasive Animals Cooperative Research Centre. Following about 7 years of research and testing, the K5-RHDV1 strain was finally released at about 600 sites around Australia in the first week of March.

K5 was selected from all of the candidate RHDV strains tested because it proved more lethal than existing RHDV1 strains in rabbits which had been previously infected by a benign calicivirus. The benign virus was present in Australian rabbits before RHDV1 was introduced as biological control in 1995. Where the benign virus is common in the cool moist areas of southeastern Australia it partially blocked the effectiveness of RHDV1 for rabbit control. Consequently, the release program has focused on establishing the K5 strain in those areas, but release sites were also included drier agricultural areas and in the arid interior.

In preparation for the release of K5, participating landholders have been counting rabbits to establish a baseline population estimate so they can count again in the months after release to see what impact

K5 has had. They will also be looking for dead rabbits and collecting tissue samples so we can confirm that the released virus has been killing rabbits.

It is unlikely that K5 will repeat the dramatic reductions in rabbit numbers that were seen after RHDV1 first spread through Australia. Rabbit numbers are already partly suppressed by the field strains of RHDV1 that spread naturally each year, and some rabbits will have survived in previous outbreaks and have antibodies that protect them from infection by K5. But with \$200 million damage in agriculture each year still being caused by the remaining rabbits, even a 20% reduction in their numbers would be of enormous benefit.

RHDV2 is already here

Some proposed release sites for K5 had to be abandoned after landholders were surprised to discover that their pre-release counts had declined to extremely low levels over summer. It is almost certain that this has been due to the continuing spread of RHDV2, although myxomatosis has also been very active due to the wet summer conditions. RHDV2 was first detected in France in 2010 and spread through western Europe in the following 4 years, then jumped into domestic rabbits

in Canada and west Africa, before turning up near Canberra in 2015. It is different enough from all of the previous RHDV1 strains to be able to infect rabbits that had been previously infected by RHDV1. That capacity helped it to spread rapidly through southern Australia, and substantial declines in rabbit numbers were reported in many sites. It is probably still spreading into some rabbit populations that were missed as it was first carried across the country, probably by flies that had fed on the last dead rabbit.

The arrival of RHDV2 has made the likely impact of K5 harder to judge. RHDV2 may already have done most of what we hoped K5 would do. It may block further spread of K5 or it may work well with K5 to push rabbit numbers even lower. It may not be as efficient as K5 in areas where benign caliciviruses are common. Either way we now have two new biological agents to help in the battle with our #1 pest animal.

As researchers, we are very interested to discover which virus is spreading where. That can only be done by collecting samples from rabbits that die, so if you see any dead bunnies lying around this year, give me call....

Greg Mutze

08 83039505

greg.mutze@sa.gov.au

From the Chairman (cont)

ing smart and sustainable solutions. We also seek to support and enhance the national agenda through our membership base and the generous donations of a few individuals and organisations who can see significant additional benefits.

Knowledge gaps remain that RFA has helped to identify and begin work to resolve. One of these gaps for which RFA is currently seeking to raise additional funds, is an easy diagnostic tool to enable scientists, landholders and regional communities to monitor the status of various biological agents in the field. This potentially can be done through DNA traces carried by vectors of rabbit caliciviruses, such as flies.

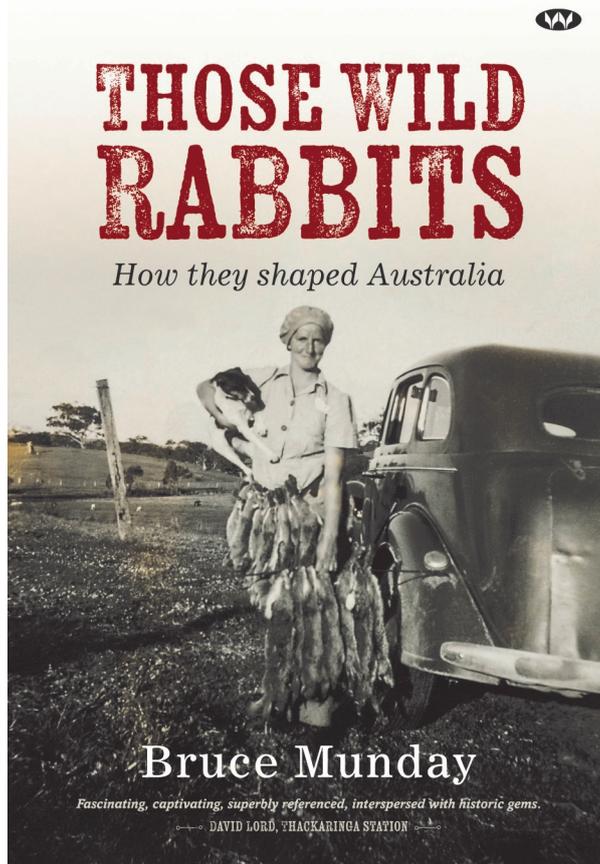
I say these things to remind us of the magnitude of the task we have as a community and as a foundation. The history of rabbit control is littered with good intentions and unexpected outcomes. Never the less we must remain optimistic and recommit to our motto of "Bilbies not bunnies".

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That memorable telegram announcing myxo had 'arrived'

Those Wild Rabbits – How they Shaped Australia

RFA is a proud sponsor of 'Those Wild Rabbits' to celebrate our 25th year of operation.



Rabbits have been around for so long that some city folk think of them as native animals. But prior to the release of myxomatosis in 1950 they were Australia's most serious pest animal.

Former RFA committee member Bruce Munday tells the fascinating story of rabbits in a timely book to be published in April by Wakefield Press. Timely, because his research includes interviews with old-timers who can recall the rabbit plagues and whose stories should never be lost lest history repeats itself. Timely also as this marks the twenty-fifth anniversary of RFA who have partly sponsored the publication.

Caged rabbits came with the First Fleet, but not until 1859 when Thomas Austin released wild rabbits at Barwon Park near Winchelsea (Vic) did they become a problem. What a problem they became! To be fair to Austin, he was not the only villain, just the most colourful.

By the early 1870s rabbits had made much of Victoria, South Australia and Tasmania home and from there NSW west of The Divide was just a matter of time. The author captures the mood as landholders first speculated that 'they'll never reach here' then soon switched to 'how are we going to keep them out?' And then 'now they are here how do we get rid of

them?' Having tried in vain shooting, trapping, poisoning, gassing and warren destruction the penultimate weapon was netting fences. Literally thousands of miles of supposedly rabbit-proof fence were erected along state borders and property boundaries.

Finally a transmissible disease, myxomatosis and 45 years later calici, ended the rabbit plagues. Whilst the battle was over the war was not won, and the author shows how the landcare model, where landholders collaborate with each other and with government agencies to control and monitor the pest, is still a fruitful way forward.

As the author says: 'The tale of Australia and the rabbit is really a tale of its people and their relationship with it. The people who brought it here, had fun shooting it, wept over its devastation of everything they valued, lived off trapping, dreamt of controlling, searched for cures, rejoiced when it finally got sick. Rabbits exhausted our emotions, our wits, our natural garden and our bank accounts.'

This is a compelling story highlighting the fundamental importance of collaboration between neighbours (including government) if pest plants and animals are to be controlled.

RFA News In Brief:

[Rabbits raid \\$1million of lettuces](#)

A family of feral bunnies can eat \$1 million worth of lettuce in a year, and that is why producers in the Lockyer Valley are supporting the Darling Downs Moreton Rabbit Board in a control program. For more information see the [Rural Weekly](#) interview with Dr David Berman.

[Barking up the wrong tree – rabbits a major threat to rangeland vegetation](#)

A recent paper in the Rangeland Journal has concluded that attempts to preserve plant biodiversity by removing livestock are destined to fail in rabbit-grazed rangelands. The paper cites studies that show little evidence of grazing-sensitive plants finding refuge in water-remote areas (sites of low grazing pressure from livestock) – while plant biodiversity gradients are readily discernible along gradients of rabbit density in livestock-free reserves. When present at even very low densities, rabbit grazing can prevent the regeneration of rangeland vegetation. It is concluded that assisting rabbit control on conservatively stocked pastoral properties may have more conservation benefit than the removal of livestock alone. To see the full paper by Greg Mutze from Biosecurity SA, visit the [Rangeland Journal](#) courtesy of CSIRO publishing.

[PhD opportunity. Ferals and Food Webs.](#)

Can controlling rabbits control feral cats? The University of Tasmania is offering research opportunities in Tasmania, South Australia and New Zealand. For more information see [NRM jobs](#).

[Landline explains – RHDV](#)

Greg Mutze (PIRSA researcher) explains the different variants of RHDV and how the release of RHDV1-K5 is managed. See the [Landline interview](#) with Prue Adams at the 19 minute mark of the February 26th episode on ABC TV.

[Predator Free NZ](#)

Plans have been announced for New Zealand to be predator free by 2050. The initial targets will be rats, possums and stoats. The news has been widely welcomed, although some have cautioned about the need for integrated programs to avoid unintended ecological changes. For more information, see [Rabbit Free New Zealand](#).

[Call to support research](#)

With so much happening at present regarding rabbit control, RFA has issued a timely reminder of the importance of strong, ongoing scientific effort. See the [Foundation's media statement](#) for more information.

[Rabbits add pressure on snow gums](#)

As if snow gums didn't have enough to contend with as temperatures rise, rabbits are now an additional pressure. Ken Green of Australia's National Parks and Wildlife Service has discovered rabbits living above the winter snowline, by grazing on the leaves of snow gums regenerating after bushfires. To learn about theories on how rabbits have managed to digest the generally unpalatable leaves see the article from [New Scientist](#).

Links to full stories can be found at
www.rabbitfreeaustralia.com.au

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Make sure you're a member to win a free book.

All members of RFA as at June 30th, 2017 will go into a draw to win one of three copies of
'Those Wild Rabbits' by Bruce Munday.