

2007 Annual General Meeting report

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RFA held its 15th Annual General Meeting at Adelaide Zoo in November 2007. Tim Rogers was confirmed as the new Chair of RFA for the next three years. Tim brings a strong business acumen to the position and has previously been Chair of various SA Famers Federation committees. He joined RFA as the SAFF representative and has stayed on as an independent member of the committee.

Outgoing Chair, Peter Allen, reported that RFA's value as an independent champion for rabbit control is gaining recognition. RFA continued to comment on State and National policy strategies throughout the year and continues to be represented on the national Rabbit Management Advisory Group (RMAG). During 2007, the Foundation also worked with several Natural Resource Management (NRM) Boards in SA to highlight the importance of rabbit control and continues to support research and training through its Postgraduate Research Grant. Rotary's Australian Campaign for Rabbit Eradication Inc (ACRE) generously contributed \$1000 to this grant in 2007. The Foundation hosted a successful technical seminar at the Waite Campus in October. The full Chairman's report is available on the RFA website.

RFA was extremely fortunate to have Mr. David Lord address the meeting. David's family have been land-owners in the Broken Hill region for four generations. He is widely appreciated for his position on rabbit control both on his own property and nationally. He was an inaugural member of RFA and has previ-

ously chaired a western NSW node of the Foundation.

David is currently the inaugural Chair of the National Rabbit Management Advisory Group (RMAG) and continues to be a strong advocate for rabbit control amongst industry and political circles. He reported on the purpose and activities of RMAG.

RMAG evolved from woolgrowers' concerns at rising rabbit numbers seen in the pastoral zone. Australian Wool Innovation (AWI) and Meat and Livestock Australia (MLA) jointly committed \$700 000 to the end of 2007 for RMAG and rabbit research by Brian Cooke. Other members of RMAG include Tony Peacock (CEO, Invasive Animals CRC); Greg Mutze (SA rep); and representatives from Bureau of Rural Sciences; Dept. Environment & Heritage; VIC, NSW & QLD state agencies; AWI & MLA grower and executive representatives.

In February 2007, RMAG members David Lord, Tony Peacock, Brian Cooke, Ian Rogan and Peter Allen met with Senator Eric

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David Lord (left) with new chair Tim Rogers (centre) and outgoing Chair Peter Allen (right) at the AGM.

2007 Postgraduate Research Grant: project update

Maija Marsh has completed field work in NSW and has now returned to the UK where she is continuing data analysis.

Transmission and effectiveness of RHDV in rabbit populations. Maija Marsh.

I came to Australia to join the Vertebrate Pest Research Unit at the NSW Department of Primary Industries in December 2006, to do my PhD fieldwork in the transmission and effectiveness of RHD at two sites in the Central Tablelands of NSW. The fieldwork involved radio-tracking, trapping, taking blood samples, distance sampling, and collecting data on insect vectors.

Analysis of these data will help us to further understand the impacts of factors such as social and spatial organisation of rabbits, population density, and abundance and diversity of insects on the differential transmission and persistence of RHD at a local scale.

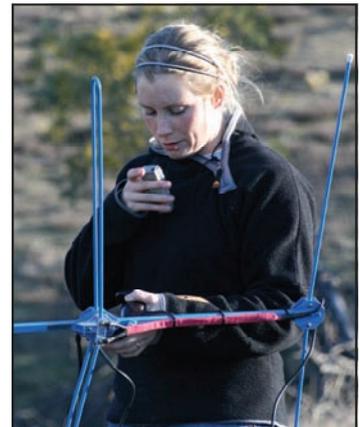
In addition to fieldwork, I have managed to meet many researchers who study rabbits and RHDV during my stay in Australia. This has been extremely valuable in terms of creating opportunities for collaborative research. I have received various long-term datasets on rabbit abundance and RHDV prevalence from across Australia, which will be used to test temporal models on RHDV transmission and effectiveness at landscape scale.

I have now completed the second year of my PhD and finished the fieldwork. I will soon return to the University of York, where I will get on with data analysis and modelling work.



Maija Marsh during field work in NSW.

*Bottom left: releasing a processed and radio-collared rabbit.
Bottom centre: taking a blood sample from the ear of a wild rabbit.
Bottom right: radio-tracking released and collared rabbits.*



Committee Member Profile: Dr. Nigel Long

Nigel is the Natural Resources Manager for the South Australian Farmers Federation (SAFF), and the Federations representative on the RFA Committee.

Prior to joining SAFF, he was a Research Scientist with the Barley Breeding Program located at the University of Adelaide's Waite Campus. Over eight years with the breeding program Nigel had a number of

research roles in the areas of agronomy and breeding for abiotic stress (frost tolerance, soil type and drought) and malting quality.

Nigel's PhD was also attained at the University of Adelaide and also focused on adaptation to abiotic stress in South Australia's marginal cropping areas.



Research Seminar: Effectiveness of Rabbit Haemorrhagic Disease

The Foundation hosted a successful technical seminar at the Waite Campus in October 2007. Maija Marsh, Piran White (University of York, UK), and Mike Hutchings (Scottish Agricultural College, Edinburgh) all presented on their rabbit research, short summaries are given below.

Host behaviour and wild-life disease transmission *Piran White*

Wildlife diseases can present a problem, for example if they are infecting species of conservation importance or causing economic loss, or a potential solution, as in the case of biocontrol. One of the key characteristics of many 'problem' diseases is that they tend to aggregate in the environment, resulting in persistent disease in certain places. Understanding

the origins of this patchiness can help us to devise appropriate management strategies for disease. One of the processes that can contribute to this patchiness is the behaviour of hosts. In this talk, I discuss this from the perspective of bovine tuberculosis in cattle and badgers in the UK and rabbit haemorrhagic disease virus (RHDV) in rabbits in Australia. In particular, I describe some of our recent work on badgers in the UK using novel proximity detector data loggers. This technique has enabled us to quantify the frequency of badger-badger and badger-cattle contacts for the first time and to start constructing social networks for badger populations. With the support of an Invasive Animals CRC studentship awarded to

Maija Marsh, we are now applying this technique to rabbits in Australia, on a couple of study sites in New South Wales. We are hoping that the technique will reveal hitherto unknown aspects of rabbit social behaviour, and importantly, allow us to make comparisons between sites that may generate some behaviourally-related hypotheses to explain spatial variation in the effectiveness of RHDV.

More information on Dr. Piran White's research can be found at:

<http://www.york.ac.uk/depts/eeem/people/white/white.htm>

The role of rabbits in the epidemiology of paratuberculosis

Michael R. Hutchings

Recently the known host range of *Mycobacterium avium* subspecies *paratuberculosis* (known as Map), the causative agent of Johne's disease in livestock and possibly linked with Crohn's disease in humans, has been extended to include a range of non-ruminant wildlife species. Of these new host species, the rabbit is thought to represent the greatest risk to livestock. Map is transmitted

via the faecal-oral route and rabbit faeces can contain millions of bacteria. Grazing cattle do not avoid rabbit faeces and they often ingest rabbit faecal pellets and are thus exposed to Map from rabbits. Rabbits are asymptomatic carriers and Map has been isolated from a range of rabbit tissues and excreta suggesting a number of routes of rabbit-rabbit transmission. Mathematical modelling suggests that these routes of transmission are

sufficient to maintain infection in rabbit populations over extended periods of time, thus necessitating their inclusion in any livestock disease control strategy.



Left—right: Peter Allen, Mike Hutchings, Piran White and Maija Marsh

2008 Postgraduate Research Grant

This year's Postgraduate Research Grant has been jointly awarded to Peter Elsworth (University of Canberra) and Maija Marsh (University of York, UK). Their project is investigating the body temperature profile of rabbits challenged with Rabbit Haemorrhagic Disease Virus (RHDV). RHDV has been extremely effective in some areas of Australia but less effective in others, and variations in its efficacy are not fully understood.

Maija and Peter's respective PhD projects are concentrating on different ways of improving the transmission and effectiveness of RHDV as a biological control method in Australia.

Maija Marsh is studying causes for differential effectiveness of RHDV between rabbit populations from two geographically matched sites. She was awarded the RFA grant last year to fund a

collaborative visit by her supervisor, Dr. Piran White, who also presented at our research seminar in October. A progress update on her project and summary of the research seminar can be found on pages 2 and 3 of this newsletter.

Peter Elsworth's PhD is on the presence of genetic resistance towards RHDV. Testing rabbits to determine the presence of resistance involves a challenge with a known amount of the virus and recording mortality and survival times.

The joint study that has been awarded the 2008 RFA grant involves implanting internal temperature loggers in the peritoneal cavity of 20 rabbits prior to a challenge with RHDV, in order to identify the exact time of infection and death in a controlled environment. The trial will also confirm whether RHDV causes fever in rabbits and show whether this fever pattern is

unique to RHDV. This study is an important addition to the two ongoing PhD projects on RHDV transmission and effectiveness summarised above.

It is important to confirm that fever due to RHDV is recognisable, as well as to examine whether the fever pattern is unique and can thus be used as a diagnostic.

This project will study the body temperature profile of rabbits challenged with RHDV



Image right: Peter Elsworth with a rabbit in a trap at Bulloo Downs

2007 Annual General Meeting report

(Continued from page 1)

Abetz to raise awareness of rabbit control in Australia. In June RMAG members met with the Standing Committee on Agriculture, Fisheries and Forestry, chaired by The Hon. Alby Schultz MP. The Committee gave them a good hearing and were sympathetic to a presentation by David Lord & Greg Mutze. RMAG was asked to put a funding proposal together which evolved to become the proposal for a national Centre for Biological Control of Rabbits. RMAG kept the pressure on in the subsequent months with visits to Senator Abetz and the speaker, The Hon. David Hawker MP, and prior to last year's Federal election, letters to The Prime Minister, to The Hon Mark Vaile and to The Hon Peter McGauran seeking support for the proposal. RFA also sent letters to the Prime Minister and all relevant Ministers and Shadow Ministers supporting the RMAG proposal for a National Centre for Biological Control of Rabbits.

The Coalition committed a fund of \$8 million in their election policy "Tackling the feral pest menace", however it was not clear what the make-up of this funding was. In November Matt Flugge and David Lord met with then Shadow Minister for Primary Industries, Senator O'Brien, who requested a scoping study for the proposed Centre for Biological Control of the European Rabbit.

David has ripped some 28000 warrens on his property, Thackaringa, and is producing some healthy sheep as a result—despite total rainfall of only 15mm per year over the last two years. However, large scale ripping is not possible everywhere.

Australia's high extinction rate of small to medium sized mammals is often blamed on pastoralists however the distribution of small mammal extinctions overlays neatly with rabbit distribution maps.

Foundation for Rabbit-free Australia Postgraduate Research Grant 2009



The Foundation invites grant applications from suitably qualified students in agricultural science, natural resource management, agricultural economics or social science who are intending to commence or have started approved Australian post-graduate tertiary studies (Masters or Doctorate degrees) that relate to the management and control of feral rabbits or to the species or ecosystems that are affected by feral rabbits.

Grants will be awarded on a competitive basis and may provide up to \$5000 to support:

- overseas travel for a study tour; OR
- attending and presenting research results at a relevant international or national conference; OR
- a visit by an eminent overseas scientist, working on rabbits or in a related field, to Australia to mentor the student and address Australian and/or regional conferences; OR
- the purchase of essential equipment required for the post-graduate, rabbit-related research and development project.

The Grant is open to Australian citizens or students that have been continuously resident in Australia for three years immediately preceding the closing date for applications.

How to Apply for an RFA Postgraduate Research Grant

Details are on the RFA website at
<http://www.rabbitfreeaustralia.org.au/grants.htm>

Applications close Friday 31 October 2008

Applications can be e-mailed to

admin@rabbitfreeaustralia.org.au

or posted to

Mrs Keryn Lapidge
Foundation for Rabbit-Free Australia
48 Oxford Terrace, Unley, SA 5061

Invasive Animals CRC rabbit research update

Freeze-dried RHDV

This project is aimed at providing a formulation of the virus that can be readily and conveniently stored, shipped and used effectively anywhere in Australia. This is not the case at present because of the need to store the registered viral suspension at ultra-cold temperatures (-70°C) and ship it on dry ice, which makes it very expensive as its considered a dangerous good.

On top of this the viral suspension very quickly deteriorates once thawed, which rapidly reduces its effectiveness if shipping is prolonged or delayed.

Elizabeth Macarthur Agricultural Institute (NSW DPI) vets, Drs Andrew Read and Peter Kirkland, have continued to test the stability of the freeze dried formulation of

the virus after a very busy time contending with equine influenza.

Current data indicates that the virus is relatively stable for 3 months at room temperature and very stable for at least 6 months when refrigerated. The stability of the formulation over 12 months of refrigerated storage will be known by late July 2008.

Based on the current results we fully expect the freeze dried RHDV to remain infective and pathogenic. Should this be the case we will submit a new product registration application to the APVMA in the spring of 2008 that should be assessed within 6 months.

The IA CRC is keen to see the new product branded

and is aiming to hold a naming rights competition to increase the profile of the damaging nature of rabbits and the availability of this new product in controlling rabbits.

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FREEZE-DRIED RABBIT CALICIVIRUS

Contains: 5000ID50 units

TAKE AIM™

APVMA # _____ Batch: _____
Store below 8°C (Refrigerate) Expiry: _____

Directions for use: Read enclosed leaflet before using this product. Strictly for administration to European rabbits.

FOUNDATION FOR A RABBIT FREE AUSTRALIA Annual General Meeting



Notice is hereby given that the SIXTEENTH ANNUAL GENERAL MEETING will be held in the Board Room on the first floor of the Administration Building at the Adelaide Zoological Gardens, Frome Road, ADELAIDE SA on TUESDAY 18th NOVEMBER 2008 at 2:30 pm.

RFA is extremely pleased that Dr. Chris West, Adelaide Zoo CEO, will be guest speaker at this year's meeting.

**Membership and donation form is on the next page of your Newsletter.
Membership fees for 2008 are due by the AGM.**

For catering purposes, we would appreciate it if you could let us know if you plan to attend the AGM.

***All members, feel free to attend whether or not you have notified us.
Non-members, please let us know so that you can enter the zoo without charge.***

***RSVP to Keryn Lapidge on mb 0414 600 878, e-mail admin@rabbitfreeaustralia.org.au
If you have a problem on the day ring Keryn on her mobile phone 0414 600 878***

IA CRC rabbit research update

(Continued from page 5)

Carbon monoxide (CO) Pressure Fumigator

This project will provide the first fully portable carbon monoxide pressure fumigator for humanely and rapidly controlling rabbits in areas where conventional controls are not an option.

The final prototype has been completed and initial bench testing has proven positive. The performance of the prototype will now be tested under a range of conditions that will mimic operation in the field so that the robustness and reliability of the prototype can be checked out and optimized.

A contract for the manufacture of 5 additional field trial units has been agreed and these will be used to run field

trials principally in Victoria and New South Wales this coming Spring and Summer. Additional trial work may be agreed on a case-by-case basis (please contact Dr Simon Humphrys at the IA CRC if you think you have an ideal site for field trials).

We hope that the field trials will prove the effectiveness of this technique and that these trials will allow us to submit a registration application to the Australian Pesticides and Veterinary Medicines Authority once we have the results in hand.

Contact details:

Dr. Simon Humphrys, Invasive Animals CRC.

Ph: (08) 8357 1222,

Email: simon.humphrys@invasiveanimals.com

Below: Prototype Carbon monoxide pressure fumigator unit





Membership and Donation Form - 2008

Details for Membership or Donation

Title _____ Surname _____ Given Names _____

Organisation _____

Address _____

State _____ Postcode _____

Phone _____ Fax _____ Mobile _____

E-mail Address _____

DONATIONS OVER \$2.00 TO THE FOUNDATION ARE TAX DEDUCTIBLE

I would like to contribute/pledge \$_____ to support RFA's funding of rabbit research programs

MEMBERSHIP OF THE FOUNDATION FOR RABBIT-FREE AUSTRALIA

I would like to become a member of the Foundation for the period 1 November 2007 to 31 October 2008

<u>Subscription Fees</u>	<u>Tick Box</u>	
Student	\$5.00	<input type="checkbox"/>
General	\$30.00	<input type="checkbox"/>
Corporate	\$100.00	<input type="checkbox"/>
TOTAL	\$_____	

SEND PAYMENTS TO

Foundation for Rabbit-Free Australia
 c/- 48 Oxford Terrace
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Subscriptions for 2008 RFA membership are due by the AGM (18th November 2008).
 Thankyou to those members who have already paid their subscriptions this year

Office Use Only	
Membership fee paid on	/ /
Amount	\$
Membership receipt number	
Donation amount	\$
Donation receipt number	
Receipt(s) posted	/ /

Other news

- The SA Murray-Darling Basin NRM Board has released its rabbit control booklet and the Adelaide and Mount Lofty Ranges NRM Board has released its draft NRM Plan and online rabbit information. RFA had some input into both via commenting on the draft booklet and attending public meetings. For more information, see the links below:
<http://www.samdbnrm.sa.gov.au>
<http://www.amlrnrm.sa.gov.au>
- RFA made a submission to the Rudd Government's *Australia*

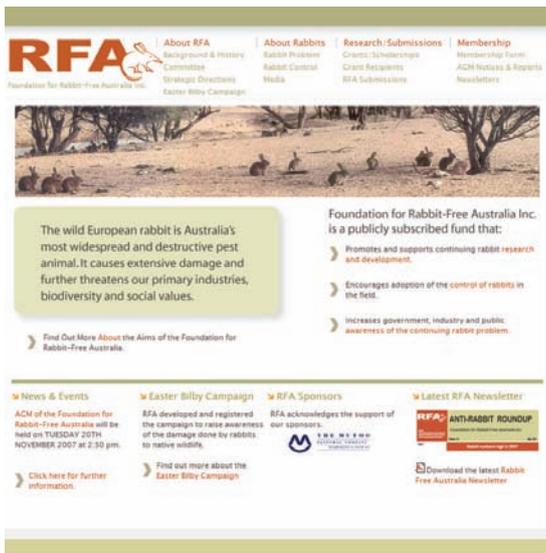
2020 Summit, held at Parliament House on 19-20 April 2008.

(www.rabbitfreeaustralia.org.au/nrm_main.htm)

- A booklet on assessing rabbit problems to protect biodiversity has been published as part of Brian Cooke's recent studies. Titled *Rabbits: a threat to conservation and natural resource management*, it is designed to be used as a tool to help people rapidly assess a rabbit problem and take action. The booklet can be downloaded from the RFA website and hard copies can be provided on request.



WEBSITE UPGRADE



We have recently updated the design of our website and continue to add new information. RFA would like to thank our website sponsor, The Mutooroo Pastoral Company Pty Ltd, for their continued generous support.

On our website you will find information on:

- The history of RFA
- Rabbits in Australia and rabbit control
- Our Awareness Strategy, Strategic Plan
- RFA grants and scholarships
- Submissions and reports
- Download our past and latest newsletters

www.rabbitfreeaustralia.org.au



David Lord (left), Peter Allen and Ron Sinclair (right) during a visit to the Animal & Plant Control Group's rabbit research site at Turrefield, November 2007. Word is that "our esteemed dapper visitors made no offer to help us with the fieldwork - though we did feel loved that they would come and visit us!!"

