

What is eating Australia?

By Rob Morrison

A Rabbit-free Australia

It is hard to imagine an Australia without rabbits. What springs to mind is a richness of habitat and ecological diversity, but examples are difficult to cite.

You can see it in parts of Australia unsuited to rabbits, such as the tropical regions, but they are exotic to southern eyes and don't suggest what the great arid heart of the country could look like without this feral scourge. In any case, with Cane toads and Mimosa, the tropics have feral problems of their own

The privileged have seen it in some of our offshore islands; conservation zones like Reevesby and Franklin Islands; refuges in which to breed threatened species once plentiful on the mainland but displaced from there by rabbits, but these islands by their very nature and sometimes by decree, are inaccessible to most, and most can therefore not imagine them.

In short, the Australia that we as wildlife enthusiasts and professionals fight to retain or restore is to most Australians fast becoming imaginary; even an illusion. That is not to say that we should stop trying, but sometimes it seems a bit like trying to recapture pioneer life of 200 years ago, the romance of open fires, lamplight, and simple self-sufficiencies. They played a large part in our early colonial literature and still register in the souls of even urban Australians at the close of the twentieth Century. The largely unblemished environment in which they occurred is far harder to evoke.

And yet we persist in trying to evoke it. In the case of the Anti-Rabbit Research Foundation that ideal provides our guiding principal; to rid Australia of wild European rabbits. For others in the business of pest control and wildlife management, it guides their life's work.

Perhaps because Australians can not imagine how the country might be without feral animals, many are, to a worrying extent, indifferent to the challenge of removing them or even hostile to the attempt. I suspect that ecologists and wildlife managers can, in fact, do a pretty fair job of imagining a rabbit-free Australia, but they are not the people that we need to convince, and therefore we find ourselves forced regularly into explaining why such an aim is desirable, and justifying it in terms that do not always strike even us as the most compelling.

We talk of the cost of rabbits, but freeing Australia from rabbits and other feral animals is not, to some of us, primarily a financial matter. To pastoralists it may well be, and it is a good argument to use in enlisting public support, but for many of us it is the loss of non-farmed Australia that hurts: the loss of its wilderness and its wildlife and its native ecology.

But when we adopt this line, and we talk of the native animals and plants that would benefit from the removal of feral pests, we meet the blank looks of those who can not imagine such an Australia. We must then explain to our listeners just what those plants and animals are, and we are reduced to trying to give verbal substance to images and relationships that are visual or emotional, complex and intertwined and, because words are poor servants in that cause, we can often feel the indifference of those who have never seen such wildlife, could not recognise it and have absolutely no idea of its ecological role.

We need to challenge this general lack of familiarity with wildlife as we try to convey the seriousness of the feral pest problem to fellow Australians who simply cannot visualise the extent, severity or

consequences of it. I should like to look at three aspects of it; the cost of feral animals, some cultural issues, and the peculiar ways in which we look at risk.

Let me dwell on rabbits because they are pretty topical at the moment, especially since the RCD virus has now spread to all mainland states and its formal release is imminent. The whole RCD program also provides a useful case study of the ways in which cultural factors and risk assessment can undermine our work. When it comes to rabbit control, what are some of the costs and benefits? Let's look at the big picture first.

The economic cost of rabbits

Estimates of the annual cost to Australia of its rabbit population vary greatly. About ten years ago, one estimate tallied the annual losses to primary production as 90 million dollars; another as 115 million dollars in the wool industry alone. During trials of the RCD virus, the annual figure of about 110 million dollars was commonly cited in the media, and continued to be the figure used once RCD had become established on the mainland late in 1995; It is a figure that must be both wrong and very low.

Losses to South Australia alone were estimated to be at least \$22 million in 1993, while in 1952, the national increase in wool and meat production following the introduction of myxomatosis was calculated to be \$590 million. The most recent estimate of the agricultural cost of rabbits includes their impact on the production of wool, sheep meat, cattle and crops and sets the figure at 600 million dollars annually; 3% of Australia's entire agricultural production.

Environmental costs are much harder to measure, but if each rabbit in Australia ate only one seedling per year, then at commercial rates, that would cost \$300 million annually. Of course, native seedlings are not assigned such a value, but the rabbits do eat them, they eat many more than one each per year, and as well as driving many native plants toward extinction, they destroy the efforts of Greening Australia, Trees for Life, the Billion Trees Project, windbreaks, attempts to reclaim saline land, erosion controls and so on, all of which - even those that rely on voluntary workers - have a large monetary value.

But how can you calculate that? These figures are more useful in conveying a picture of just how many rabbits there are than in accurately conveying their environmental cost. And many Australians simply don't see the ecological value of a seedling and assess even large trees in terms of firewood or timber, not in terms of habitat value, their ability to provide offshoots, seedlings and nesting hollows once they are dead or dying. Common plants are undervalued in this way, but no value can adequately be placed on priceless things, and threatened plant and animal species are among them. The rabbit has been a major factor in the loss of small mammals, birds, reptiles and plants, especially in the arid lands.

But allow at least the figure of at least 300 million for all of this, then add another very conservative figure of 100 million for research programs and rabbit control measures, and you have a conservative cost of more than 1 billion dollars that the rabbit is costing this country every year. We could add the cost of other feral animals like goats and pigs, go on to add the cost of feral carnivores like the fox and cat and then we might draw breath and start to calculate the cost of feral plants.

Un-priced costs

In other words, there is a great deal at stake, but it is not just in terms of economics, it is in terms of the loss of biodiversity, entire species, habitat, ecological health, tourism amenities, aesthetic values and more, but we must fasten upon the first of these aspects, the financial one, and use it as our main argument because, to most Australians, the remainder can only dimly be imagined and so they are little use to us as bargaining points.

Although RCD will not rid Australia of rabbits on its own, it is easily the most promising and cost-effective tool at our disposal, and if we use it properly, we will find ourselves decidedly in credit, as it will so greatly reduce the costs of these conventional controls, but are there other costs to be borne from its use?

One that has been cited is the danger that RCD might mutate, or attack unknown species. Let me come back to that later. On the human side, there are certainly isolated groups of people that have already been affected by the outbreak of RCD. Some aboriginal communities have lost a source of plentiful meat; pet-owners must now vaccinate their pet rabbits; while rabbit-meat processors lost an industry overnight. Again, these groups have been well publicised because Australians can relate to what they are losing - money, jobs, pets, and food. Those things are important, it is true, but so is the very existence of plant and animal species; it is just a lot harder for people to imagine them or to relate to them with the same clarity and immediacy.

In any case, even the claims of all of these disadvantaged groups could be embraced with considerably less than one year's savings from effective rabbit control. That would be a relatively easy thing to do. What is harder to resolve are the cultural issues and fears raised by a determined attempt to rid this country of rabbits. And added to them is now another; an ethical one, that is, what rights do the rabbits have in all of this

At the time of the accidental release, and even before then, when the planned release was being discussed, animal rights groups questioned the ethical use of the virus because of a concern for the rights of rabbits that would be harmed by it.

There are certainly ethical concerns about the eradication of millions of creatures, and they are to be argued seriously, but some of the ethical debates include a disturbing amount of public sympathy for the rabbit. No bad thing in itself, as it suggests that a large proportion of our community cares for animals and wishes them well, but sympathy is not ethical concern. In this case it is worrying when it really means, as it must, a corresponding lack of sympathy for native Australian animals. They are just as attractive and, because they are the rabbits' victims, they are at least as deserving of popular support. Perversely, they don't receive it.

Lost species due to rabbits

They are a range of medium-sized mammals in the weight range of 1-10 kg. They include bandicoots, smaller wallabies, larger native rodents and a variety of ground nesting birds like mallee fowl and penguins, and to most Australians, their identity and status is unknown.

Already, ten species of marsupials and eight species of rodents have succumbed, in part at least, to the rabbit, and others survive only on offshore islands, where rabbits have not been introduced.

The plight of these animals is largely ignored when people agonise over the treatment of the rabbit. In 1993, at a rabbit conference in Adelaide organised by ARRF, a thoughtful analysis of ethics and controls was presented which examined the framework by which people make decisions about killing an animal. Is it cute or ugly; native or introduced, useful or useless, a pet or a pest and so forth?

It exposed our tendency to justify maltreating species simply by reclassifying them into a category that we found less desirable and concluded that the best justification for the killing of animals lay in defending ourselves against being fatally attacked by them (an uncommon event with rabbits) or preventing them from destroying our livelihood, which rabbits certainly do. In other words, the

ethical considerations were mostly influenced by a balance of animals' interests versus human interests.

I suggest that there is an issue quite different from this when it comes to controlling rabbits or any other feral pests, and it has little to do with immediate human interests. It has to do with ecological well-being, and it virtually requires that rabbits be dispensed with in order to safeguard the rights of other animals and plants. Human interests are almost irrelevant in that context

In much of the argument to defend the rabbit against eradication, it is the rabbit, not the native species of Australia, that attracts sympathy. We see the same thing when people defend introduced willows along the River Murray, pine trees in National Parks, and domestic cats when they prey on native birds. In each case, sympathy lies with the familiar, known, introduced species and against the interests of the native animals or plants that they replace.

I have just completed a study on the loss of natural nesting hollows that are vanishing as we clear land and turn to wood as a heating fuel. The hollows that remain are essential for many birds, most of our truly arboreal marsupials and dozens of bats and rodents, but the study showed that they are strongly competed for by introduced starlings and honey bees.

Both species are now wildlife pests, bees especially, but people make money out of bees and there is consequently much less support for controlling bees than for controlling starlings.

Some schools who helped with the project were even pleased when starlings or bees took over a nestbox. To the children and their teachers, who could not distinguish a starling from a native species, this was wildlife success. They followed the raising of the young starlings and some have retained the beehives as natural history features within the school. They use these feral animals in their lessons, drawing not on natural history books from Australia, which might have talked of possums and parrots, but on natural history books from America and Europe which reasonably enough present starlings and bees as desirable.

Lovers of cats and other feral animals

How can one account for such sympathy for feral species which are so destructive of our native ones? How does one account for such sympathy towards the rabbit; Australia's number one vertebrate feral pest. It seems to be a combination of familiarity with the ferals and ignorance of the indigenous, but it is more than just familiarity with them, it is sometimes preference for them.

Cat-lovers endorse the rights of their pet cats to kill native bird species that they do not recognise and can not name. Rabbits are believed to be pets in well over 1 million Australian households, but rabbit-lovers are usually indifferent to and ignorant of, the fate of Mala wallabies, stick-nest rats, bettongs, bush rats and hosts of other native creatures that rabbits displace.

I think that those un-Australian sympathies are at least partly because of our European background, and increasingly Americanised culture. Many who were reared on English stories or American cartoons, know and relate to rabbits more closely than they do to native Australian animals.

This curious legacy of our European and Americanised culture is costing our wildlife dearly, for in denying ourselves an understanding of our own ecology and the wildlife it embraces, we favour instead the cause of an introduced pest that we have come to know and love variously as Peter Rabbit, Bugs Bunny or the symbol of Easter.

In any Australian equivalent of Beatrix Potter tales, many of the diverse characters that should grace them would be unknown to most Australians, whose limited understanding of their own ecology

leads them, instead, to recognise only a few native animals like the koala, the kookaburra and the kangaroo, and elevate them to the status of icons or symbols of Australia.

This infatuation with a few Australian icons itself contributes to the plight of other native animals. Recently, South Australians were informed that populations of koalas on Kangaroo Island were out of control and that culling seemed the only solution. Reaction was so swift that politicians quickly dismissed culling as an option, and the local newspaper started a public campaign to plant thousands of feral eucalypts on the Island. One shudders to imagine what the situation will be once the koala population has expanded to take advantage of this new resource, and wildlife managers again confront the problem fifty years from now.

But even before then, Adelaide Hills dwellers were busily planting, and winning public funds for, a 'koala corridor' of trees imported from New South Wales. The koala was never a part of the hills ecosystem. The southern brown bandicoot was, and yet, as the imported eucalypts now hybridise with those true to the region, bandicoots in the undergrowth beneath them are rapidly, and almost without note, disappearing because of foxes and cats, and for lack of public funds to save them. Why? Because they are not an icon. They are not even known to most Australians, and in this country, that means death by indifference.

Easter Bilby

Until the Anti-Rabbit Research Foundation began the Easter Bilby campaign a few years ago, most Australians, even 4th and 5th generation Australians, had no idea what bilbies were, what they looked like, where they lived and what their ecological needs were. Now they are beginning to. The Easter Bilby was a deliberate attempt to create a rival to the Easter Bunny out of a threatened native animal of equal appeal. As a result, the bilby, especially at Easter time, is winning recognition that a few years ago was directed toward the familiar, cuddly bunny.

It has been such a successful campaign that the bilby is fast becoming another icon. The campaign has also made the bilby newsworthy. This year alone, we have seen television stories not just on the Easter Bilby, but on its introduction to sanctuaries, birth in captivity and planned re-introduction to the wild. Each story showed bilbies to the public. Often, that is all you have to do to change public attitudes, but while the Easter Bilby campaign has at least brought the bilby into public awareness, it is only one of many native animals of which Australians remain largely unaware.

Some of the ethical concerns for rabbits and other pest animals were well aired at a recent conference on humane aspects of vertebrate pest control. Among them was an argument from animal liberationists stating that the most ethical course was to minimise pain. In other words, killing a hundred rabbits is worse than killing fifty bilbies because the sum of the pain involved is presumably greater.

Those who argue against this line, and I am one, must confront their values. Why should a bilby be preferred to a bunny? Why should we eradicate starlings and bees in favour of parrots and possums? Why should the rights of native bandicoots and rats be superior to those of introduced rabbits?

In terms of individual animals, perhaps they are not, and we are simply, as some liberationists claim, applying a classification that can be dismissed as subjective and arbitrary, but these native species deserve our support for empirical reasons, not for arbitrary reasons, and furthermore, the support that they deserve is almost entirely unrelated to any human benefits that might come from it.

The rights of ecosystems & inappropriate organisms

The argument is not really about the rights of individual animals. It is about the rights of ecosystems. Many animals can exist nowhere but in their own environment and ecosystem. While an individual rabbit may be the equal of an individual bilby in ethical terms, and equally deserving of ethical and humane treatment, there is a whole extra set of ethical reasons for defending Australian animals in Australian habitats. That is all they have, and Australian ecosystems can exist nowhere else.

By that measure I would strongly advocate the protection of brush-tailed possums in Australia, where they are indeed a protected species in some states despite the agricultural damage that they may do, but argue equally strongly for their total eradication in New Zealand. There they are the equivalent of an arboreal rabbit; destroying a huge amount of that country's vegetation and endangering native New Zealand birds which can only survive in a New Zealand ecosystem.

A New Zealand possum is just as worthy as an Australian one, but the former is where it should not be and is destroying something irreplaceable. The latter is where it should be, and is maintaining something that can exist nowhere else.

It is not the rights of individual animals that are the essence here, but the rights of ecosystems which cannot survive when they are invaded by inappropriate organisms. The removal of those inappropriate organisms is a matter of paramount importance.

On this basis, the determination of which animals have superior rights is based on the roles of those animals in the ecosystems where they are found. If they belong, defend them. If they disrupt, remove them, and the decisions can mostly be made without reference to human benefits and losses.

The other element that confuses the controversy has been the assessment of risk. The unexpected release of RCD onto the mainland produced an extraordinary outburst of apprehension. We were told that it was likely to mutate, to affect native animals; even to contaminate people. Listeners were given massive quantities of air-time on talk back radio to explain how their pet cats were being affected by RCD even in areas of Australia where rabbits have so far not succumbed to it.

Others suggested darkly that RCD was almost certain to lay waste Australian wildlife (and even people) in a way that it has never begun to do, to even one species, in dozens of countries, in more than ten years; and much media space was given, not to those most qualified to speak on the issue, but to those who were more sensational in what they claim, or who had, in some cases, self-interested reasons for claiming it.

One problem with this kind of attack, whether it applies to RCD or any biological control agent you care to discuss, is that it is logically impossible to prove that it will not behave aberrantly, and the inability to prove that it won't do so is taken as an admission that it will. Another problem is that the manner in which the virus became widespread greatly complicated a proper assessment of the real risks and advantages attached to its use.

Risky things

Risk used to seem a simple thing, but Peter Sandman, a Boston scientist, has developed a new view of it. He sees risk as involving two components. One is hazard (which can often be determined empirically or statistically), and the other is outrage (which relates to whether something is voluntary, fair, who has control of it and so on). In Sandman's own examples, smoking is seen as low-risk because for voluntary smokers the outrage is low, although the hazard is high. Nuclear pollution is seen as risky because, although the real hazard is very small, outrage is very high.

In the case of RCD, had the trials, discussion and public involvement proceeded as planned, I believe that it would have been seen as an event of miniscule hazard and very low outrage, and it would have been released in two years' time with a very favourable public response. Its accidental release did not increase its hazard one iota, but it did produce great outrage; accounting, I believe, for the extent of the hostile public response to it. It is significant that the additional trials demanded by the incoming government are those that will help to allay public fears and thus decrease outrage.

Inconsistency in assessing real risk seems to be a human trait. People are much more frightened of crashing in an aeroplane than they are of a car crash on the way to the airport, but the hazard of the latter event is far higher. In Australia, it is sharks and snakes than we fear the most, but it is bees that kill more people than any other animal. Nonetheless, we hunt sharks and kill snakes while we nurture our beehives, even in suburban back yards and natural nesting hollows.

In other words, our behaviour is dictated by perceived and imagined risk, not by a measured assessment of real risk. In the case of the RCD release, this was compounded by its unfair portrayal as a killer virus that escaped from laboratories. and caught scientists unaware. In reality, field trials had been continuing for a long time and even they could not have begun had RCD not been assessed as a virus that held no hazard for wildlife; a position so well understood that every state and national government of Australia and New Zealand had agreed that the release of the virus was a desirable goal in the fight against rabbits.

Were we to be consistent in our concern about viruses, we would do better to restrict the movements of international travellers each winter, when they invariably bring truly mutating flu viruses that inevitably kill members of our human community. We might also be more diligent in imposing requirements that would see our children immunised against diphtheria, whooping cough, and polio before these diseases again become, as they once were, widespread killers of our young.

In other words, it would have helped in this debate if we were more honest about the risks, treated them consistently and assessed them properly. That did not occur with the RCD issue, and in some cases misinformation, even disinformation, compounded the confusion as people who had never worried for 40 years that they, their dogs or their cats might catch myxomatosis, confidently predicted in public that all three might well succumb to RCD

So where does that get us as we now seek to control the feral blight of rabbits on Australia, not only by this official release of RCD but by other biological agents that were certainly be needed once immunity to RCD begins to develop? It means, I believe that while we need to get our viral biology right, we need equally to involve the public in seeing and experiencing the richness, appeal, beauty and uniqueness of the wildlife that we are losing. It is not enough to cite the financial rewards or the biological principles of pest control. The fight to save the bilby is being fought through the Bilby Recovery Program and captive breeding, but equally by endearing it to people through television and at Easter. The fight to save the Franklin River was largely won, not because Australians read biological papers about the threatened species there, but because they were shown posters that revealed the stunning beauty of the place.

What we must do is to take time, sometimes even from our research and scientific publishing, to make sure that Australians get to know their wildlife, own it emotionally, relate to it and to feel their own sense of outrage when they perceive it to be threatened. In that campaign it will be posters, photographs, children's books, media appearances and wildlife documentaries that will help to carry the day just as importantly as academic papers and scientific conferences. In the matter of wildlife management above all, we need to be science and wildlife communicators, not just scientists and ecologists.

And if Australians at present show too great a sympathy for the wrong plants and animals, then let us recognise that at least they are capable of showing sympathy for living things, and let's work hard to keep the right ones constantly in view.