

ENVIRONMENT, NATURAL RESOURCES AND REGIONAL DEVELOPMENT COMMITTEE

Subcommittee

Inquiry into the control of invasive animals on Crown land

Sale — 6 October 2016

Members

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Witnesses

Mr Roger Bilney, Gippsland Environment Group, and Environment East Gippsland;

Dr Nancy McMurray, Friends of the Gippsland Lakes Parks and Reserves; and

Mr Tom Crook, programs manager, East Gippsland Rainforest Conservation Management Network.

The CHAIR — I thank Dr Nancy McMurray, Mr Roger Bilney and Mr Tom Crook for coming in for the public hearings today. You have probably had discussions with the secretariat about giving a 10-minute or so presentation or a bit longer because there are three of you. Thank you for cooperating and being happy to come in as a group within the one period to represent your three organisations. Of course if we need to spend a bit longer, that is fine as well, so please do not feel that you are rushed.

I will just go through the formalities in terms of the parliamentary committees legislation and then put it over to you to introduce yourselves for the purpose of the transcript. In accordance with the parliamentary committees legislation, the things that you say and present today are all covered by parliamentary privilege. However, if you say those things outside of the hearing it is not covered by parliamentary privilege. You will be sent copies of the proofs of the transcript prior to them being publicly distributed, and you can check them for any inaccuracies before they are made publicly available. Again, thank you for coming. If you could introduce yourselves for the transcript and give a little bit of background, that would be great. Mr Crook, do you want to start first.

Mr CROOK — Yes, thanks very much, and thanks for the opportunity to give our 2 cents worth, so to speak. My name is Tom Crook, I am the programs manager, and I am here today representing the East Gippsland Rainforest Conservation Management Network. We are a rainforest specific non-profit, community-based environment group who primarily undertake restoration activities around remnant rainforests in East Gippsland from east of the Mitchell River around to the border. We receive a variety of different types of government funding as well as other philanthropic funding to undertake those functions. I will be representing them today. I have a longstanding history and interest in the natural environment and its management, and that also extends to feral animals.

Mr BILNEY — Roger Bilney, representing the Gippsland Environment Group and Environment East Gippsland. I have been involved with wildlife since 1973 and with deer trapping, deer management and deer hunters since that time when I was in the park for 20 years as a fisheries and wildlife officer. Over the last 15 years I have been a teacher at East Gippsland TAFE, which is now Federation Training, and for the last 12 years I have been taking students up to the High Country and the Snowy River box woodland to primarily look at pest animal management, looking at wild horse, deer and wild pigs. I would also like to speak to the committee about possibly another major pest coming, which is the European wasp, which is causing enormous problems, but I will leave it at that for Nancy now.

Dr McMURRAY — I am Nancy McMurray. I am representing Friends of the Gippsland Lakes Parks and Reserves. We are a volunteer environment group, and our mission is to protect and enhance our biodiversity through engaging the public in on-ground works and making scientific submissions to government bodies. We are here because we have some concerns about invasive animals.

The CHAIR — Thank you. Are there three presentations or just the one?

Dr McMURRAY — I have a PowerPoint presentation that I will present for FOGL.

The CHAIR — Yes, okay. This is a little bit of an experiment in terms of having the three organisations together. Will we just go one by one with each person making a presentation and then we will ask questions at the end? Is that the best way to go?

Mr CROOK — Yes.

The CHAIR — All right. Are you happy to start?

Dr McMURRAY — I am not quite ready.

Mr CROOK — I guess representing the rainforest network rather than my broader interest in the environment, I just want to talk about deer a little bit today. As you would be aware from my submission, deer are having an increasingly significant detrimental impact on the rainforest communities right across East Gippsland. In the last 15 years, but certainly more so in the last 10 years, I have personally witnessed and also heard anecdotal evidence from various other people that we have really had a population

explosion of particularly sambar deer. I believe that is probably partly due to land management practices and the advent of large-scale wildfires just providing perfect habitat for them.

With that increase in population abundance and densities we are seeing an increased impact on our rainforest communities. It is not isolated. While the different flavours of rainforest, if you like — the different vegetation communities — are affected slightly differently, it really is a concentration of their impact on the coastal rainforest communities, particularly the critically endangered littoral rainforest and the warm temperate rainforest of the hinterland. The high alpine or the higher elevation areas are less impacted, but the impacts there are still acute and detrimental.

This is greatly concerning for our group because we spend all of our time trying to restore these areas and invest significant amounts of public funds in doing so. Increasingly our efforts are being hampered by the presence of particularly sambar deer and to a lesser extent hog deer, and we are almost at our wit's end to know what to do about it. We have recently embarked on a program where we are fencing individual rainforest gullies. Obviously that is not a solution at a landscape scale, but what we are hoping to do there is to demonstrate what the impact of sambar deer is on these communities, and that is the only way we can seek to do that because you cannot find a rainforest gully in coastal East Gippsland that does not have some form of impact. The only way we can show what that impact on these communities are like in the absence of deer is to actually fence them out.

We have also got quite a long history, in the extent of 10 years now, working with the Australian Deer Association and other hunting organisations in cooperation with Trust for Nature and Parks Victoria undertaking localised control programs to try and mitigate the impacts of these animals on specific rainforest gullies, but increasingly we are finding that those efforts are largely in vain and that their outcomes are very short term and certainly very localised. It is only a matter of months once those programs have finished, which in some instances have taken out large amounts of animals and in others not so many, that, irrespective of the number we take out, in six months to a year the deer have returned and the impacts are increasing and certainly ongoing.

I addressed exactly what those impacts were within my submission, but I am quite happy to go through them again now if you would like.

The CHAIR — The submissions are publicly available and we have gone through them, so I think that is fine unless there is any particular key area that you want to stress. Otherwise we can ask you questions.

Mr CROOK — Sure. As I said in my submission, it is really confined to a couple of key processes, if you like. The main one is probably the antler rubbing of canopy trees. Obviously rainforest communities are completely dependent on the maintenance of that thick canopy that creates a microclimate underneath, and deer antler rubbing on specific trees in some circumstances has actually seen the stand-level death of those trees. Along with that we are letting the canopy, and we are seeing an ecosystem level change and those rainforest communities as a direct result of that now.

Wallabies do not have antlers and they do not affect the communities in the same ways. Obviously the change in landscape use in agriculture and land use generally has increased the number of some of those other browsing animals, and so the rainforests do experience increased impact from other browsing animals, but the effects of browsing from sambar deer in particular are absolutely acute. Where we see the antler rubbing taking place and killing the canopy trees, we also do not have any recruitment anymore. There are no baby trees. There is nothing coming through in that system to replace those canopy trees once they have been removed, because they are all being eaten off by sambar. Unfortunately these rainforest communities are really good habitat for deer. They have lots of luxuriant vegetation, which is very palatable. They also provide a safe haven where generally it is very topographically sheltered. It is still and non-windy. It is really effective in sheltering them. As an animal is constantly on the lookout for hunters, is being hunted and is easily spooked, it likes rainforests because they are very sheltered. Deer tend to use them over other areas in the landscape so the effects are really pronounced within these particular communities.

The CHAIR — You were saying that the programs that have been introduced so far really have had no effect. Is it because the scale of them is too small or is it because of the actual programs, and that is working with hunters, Parks Victoria and so on?

Mr CROOK — I think it is probably a bit of both. There have been some effective programs. There is one at a property called Trevertons with Parks Victoria at the moment which we are not so heavily involved in but which I am aware of, where the management outcomes are really about trying to see a large-scale regeneration and revegetation project — just reducing the browsing pressure in the short term to allow those trees and vegetation to grow up to a certain height out of the deer browse range, if you like. That has been relatively successful in the short term, but that is an isolated example. Where we are talking about trying to reduce the browsing pressure in the longer term on these rainforest communities we just cannot apply the pressure on the deer communities, if you like — the populations through time to effect that reduction in browsing pressure.

So localised areas in the short term are relatively successful, but in the longer term and for bigger areas there is just not the investment there. We just cannot justify the investment, or it is just not possible, because in the areas where we do implement these programs and we do see a reduction in deer numbers in the short term, and which we know through camera monitoring and such, those animals are just returning and the impact is there in a relatively short space of time because the landscape is increasingly full of these animals. I would not say saturated because I believe there is potential for their populations to increase further. We encourage the use of recreational hunting to try and control their populations, but I do not feel like the recreational hunting is able to manage deer populations at a landscape level because it does not fulfil the basic tenets of a population control program. It is too opportunistic, it is not consistent necessarily through time and it is not strategic enough. We are talking about a landscape level problem.

The CHAIR — So would you look at professional or paid companies that do it in a more strategic way, or would you look at baiting? We have heard about baiting just in the — —

Mr CROOK — I am not aware of the application of baits and its success with deer currently, although I think that we need certainly the broader application of science. We need to give the CSIRO some money to try and investigate sterilisation programs or something along those lines. I know there is some research being done in that area in America, and in Canada too, but to my knowledge they are only deliverable by dart, and darting animals at a large scale is problematic.

Mr YOUNG — No different than shooting.

Mr CROOK — Not a lot different to shooting; that is right. So we are not opposed to recreational hunting, but as you would have read in my submission, I do not believe that it is able to supply population control at a landscape level, and I think that we really need some kind of assessment of the deer populations in Victoria because at the moment the only information we have to go on is through the Game Management Authority. We know how many hunters there are officially, we know how many deer we are shooting officially, but we do not know what percentage of the overall population that represents. If you looking at landscape-level control of a population, then you cannot quantify whether that is being effective or not unless you actually understand what the distribution and abundance is to start with. So, yes, they may be taking out 60 000 animals, but if we do not know what percentage of the overall population that is we cannot say whether that is actually an effective form of population control or not, and I would suggest that is not.

The CHAIR — Okay, thanks. Sorry, I should not have asked you the question now. Will we wait until the end and ask questions; is that a better way? Mr Bilney or Dr McMurray?

Visual presentation.

Dr McMURRAY — FOGL would like to emphasise that we hold values of transparency, unbiasedness and scientific evidence as very important, and we would hope for this inquiry that those values are part of it. So the key questions I would hope that you would have in mind when people are presenting are: does this person or group have a vested interest in what they are presenting, and what is the

scientific evidence for what they are saying? FOGL feels that the government has a duty of care to the environment and biodiversity, and therefore it must place the wellbeing of the environment ahead of agriculture, tourism, business and recreation; that the environment and biodiversity underpins everything that we do, and that would mean removing the protection of deer as game as very, very important. Deer are a very serious problem for the environment.

The government also has a duty of care for animal welfare. There are increasing numbers of people who are raising the issue of animal welfare, and that is including dealing with invasive animals. So FOGL feels that only the most humane methods should be used, and the selection of those methods should be evidence based. It is noted that the species database is not current. We do not know how many animals are out there, and it is very important that we try to find that out. We need an audit of current invasive species, and an analysis of previous approaches for handling or controlling invasive species. We need an audit of the threats that they impose, and we need to prioritise according to the harm of our natural assets and biodiversity.

It is noted that the Victorian Auditor-General has stated that the database must be updated and its management must be improved; that the database should be made public — and it has been recently, but it is a very inadequate database; that the trial deer program did not meet environmental management framework criteria; that much more detail is needed in planning; and that the transparency of Parks Victoria in their allocation of resources needs to be made public and the funding needs to match the problem. That was in the report in May 2010.

FOGL feels that public funds should not be used to protect private or commercial assets — for example, the cost of protecting sheep from wild dogs. We feel that that cost ought to be borne by the people who have the asset. They can get maramma sheepdogs or build fences, but the taxpayer should not be asked to pay for that. We feel very strongly — —

Mr RAMSAY — Regardless of if the animals are coming out of the public land —

Dr McMURRAY — If the animals are coming out of public land?

Mr RAMSAY — creating the economic damage. Do you believe that the farmer has to bear the cost of management control of animals that reside in public land?

Dr McMURRAY — Yes. We feel very strongly that tourism is never an acceptable reason to allow invasive species. There is overwhelming evidence of harm to our flora, fauna and biodiversity from some invasive species, and there are much less damaging ways of attracting tourists than having deer for them to look at, or brumbies for them to see. We also feel that financial gain and recreational pursuits are totally unacceptable reasons for keeping invasive animals in the landscape.

Commercial harvesting and hunting should not be promoted or accepted uncritically, which they have been in the past. There is substantial scientific evidence that indicates that both of those create incentives for spreading invasive species, and again and again recreational hunting has been found to be not an effective means of invisible animal control.

With regard to the terms of reference, FOGL presents the following facts. You have in the FOGL submission the references that back up these facts through scientific research that recreational hunting is ineffective. It removes too few animals. There is an emphasis often on trophies, and bag limits actually protect hunting resources. Carol Booth for the Invasive Species Council has done quite a bit of work in this area. There is research on pigs, using genetic evidence, that shows that there has been illegal translocation for the purposes of hunting, and, as Jenni Reside was saying in the earlier presentation, when hunters hunt animals, the animals disperse and they create a huge and greater problem than there was.

It has been found to be not humane. Many studies show that often the animals are not killed cleanly. They are maimed or just injured and suffer horribly, and the RSPCA conditions for humane culling by firearms does not endorse recreational hunting. There are incentives for increasing opportunities for hunting by spreading the invasive animals. Recreational hunting has been found to interfere with professional control.

It can alter the foraging behaviour of the animals, and the animals disperse. One of the points that FOGL wants to make is that there is no scientific evidence that supports recreational hunting as an effective means of invasive animal control.

The most effective invasive programs are intensive, and they take out large numbers of invasive animals over the shortest period of time. There have been whole seminars on this with a lot of data presented. Where shooting is deemed the most humane method — and there have been papers written that have compared different methods for particularly large animals — all of the scientific studies indicate that shooting must be done by trained, highly professional shooters. No studies have found recreational hunting to be effective.

It is interesting that on the Parks Victoria website there has been a discussion of non-native animal control by legal deer hunters, and this is available on the web page. One of the Parks Victoria people has been quoted to say:

... ad-hoc take of pest species by recreational hunting does not constitute effective control.

FOGL would like to make the following strategic points as critical to humane, successful control of invasive animals on Crown land. Any approach needs to be ecological and integrated, not species-specific alone but taking a landscape-integrated approach. The emphasis should be on protection of biodiversity rather than just control of the animal, because you actually can control a species without having positive biodiversity outcomes. We feel that any people who create, exacerbate or perpetuate problems with invasive animals should be prosecuted, and we need strong comprehensive legislation. Invasive animals are a serious, serious problem.

FOGL feels that we should have an independent auditor with strong environmental credentials and with no conflicts of interest, and that auditor needs to be funded quite generously to oversee invasive animal control.

FOGL recommends that any and all plans or protocols developed from this inquiry should be evidence-based; involve the precautionary principle; be transparent in process; define clear goals and outcomes that can be operationalised and are measurable; and of course have adequate funding. Resources to meet those goals need to be presented. They need to be carefully monitored by an independent auditor; focus on long-term strategies and solutions, not short-term solutions; aim for large reductions over the shortest time; and use the most humane methods that we have for the target animal.

FOGL proposes a community education program that will replace ignorance with understanding about the problem, that will present scientific data on the harm caused by invasive species, that will present scientific data on the limitations of some animal control methods and that will emphasise biodiversity outcomes for the community.

FOGL calls on the government to act to protect our national parks and public land for their natural values and their biodiversity. We feel that we need an invasive species strategy that protects and enhances our biodiversity, values public natural assets, is based on the best available scientific evidence, is adequately funded and is overseen by an independent auditor.

The CHAIR — Thank you. We will go to Mr Bilney and then we will ask our questions.

Mr BILNEY — Thank you. First of all, I would like to thank all sides of politics for supporting the Southern Ark program of eastern Victoria, which is a very commendable program and the funding still going to that is achieving great results. It is backs-to-the-walls sort of stuff.

But that is where the compliments sort of end. I am very disappointed in the political process that has taken place in managing invasive species, especially with the words we use in our legislation and in our management plans — CMA plans, whatever. It really is deception that the government is placing in the community. The words they use are painting this picture about how they are protecting the environment when the actual facts are very, very different.

For 12 years now I have been taking students into the alps and into the Snowy. In the autumn period they look at a lot of the research, they look at all the management plans and then for two trips during the winter we go in for three-day trips and actually observe, and all students are absolutely amazed. When they have actually done all the reading and see what is going on they cannot believe that we could allow our natural resources to be managed in the way they are.

On the horse issue, it is basically a horse farm up there. We have a lot of information through photographs that it is being farmed. It is very hard to find young foals up there in the post-breeding time. They have mostly being taken out. You can find them in rougher country. In the non-park areas, the Nuniyong area, there are practically no foals there according to people I know who have very high knowledge of that area. Certainly we can only pick up foals on our cameras that we put out this year in very remote areas.

The genetics are changing. We are now getting multicoloured horses. We are getting piebald horses. The true brumby, as we used to call it, which was short and stout, with thick hide and stocky feet, is becoming less and less. We are getting much taller animals. We are getting piebald animals turning up. We are getting white stallions, beautifully bred animals, but they are certainly not brumbies as I have known for 40-odd years from walking and being in those areas.

Just this year on the rocky planes the horse dung was so great that we decided to do an experiment of measuring 3-metre circles. We actually counted the horse dung and then extrapolated those 10 random plots out, and we got 2050 horse dungs per hectare on the plain. Now, sure in alpine areas it is slower to break down, but these were visible, actual horse dung dropping piles, and that was not counting the large stallion piles, which are under a lot of the trees there.

The horses are breaking down the area. Since the 2003 alpine fires a lot of the sphagnum areas cannot regenerate. We have enormous turbidity in the water. We have sphagnum areas that are draining. We have the government promoting recreational fishing, and yet at the very start of our alpine streams, including the Murray, we actually have dirty water, milky water, coming out of our creeks and soaks that are starting to feed our major streams. None of the streams that we have feeding into any of our rivers now is what you might call coming from a pristine environment — even though there is really no such thing.

The horse issue has been identified for more than 10 years. When the cattle were banned from going into the alps in 2005 there was no thought of putting money into the horse management issue, and everyone had already identified that as being a major issue. It has been identified since 2007 and 2008 that there was a major problem. Even Parks Victoria themselves employed Arn Tolsma from ARI for four years. He did the 2004–08 study on the sphagnum moss beds regeneration post fire, which identified the enormous problems with horse and the wallowing of deer, but it was principally horse that was the issue up there. That is a great bit of work, but it is not even on the internet. You cannot even get it. I can get you a copy if you wish to see it.

The CHAIR — That might be good, thank you.

Mr BILNEY — It is a fantastic document to work with and actually a very good education document, and it should be in the public arena. The horse issue is one that is not addressed. The reason I wrote to the minister in January was that we are actually observing what Warren believes to be the start of ecosystem collapse, and this is in two areas where we take the skins. They are both critically endangered under the federal legislation. It is not as if suddenly someone has just decided it is a problem. They have already been identified at the highest level of our national legislation as critically endangered ecosystems, and yet the treatment there is just like for the back of an old dairy farm where the cattle might be coming into a dam. On the Snowy River it is just amazing to see the incredible amount of damage from pig, deer and horse through that area.

In relation to wild pig, I first took students in there to start to monitor the wild pig movement down into Victoria, and the pigs principally came out of two areas — the Nungatta area of far eastern Victoria and they were coming down the Snowy. Parks Victoria put a lot of time and effort in the first three or four years and were very effective in stopping that flow of pigs coming down the river. Because of the

geography there — the slope and the country and the water — at certain times of the year the pigs have to concentrate near the water, which is obviously the river. But the program would then stop for four or five years. The traps were just left in situ but chained up against the scrub so they could not be washed away in the floods.

Then there was a little bit of money thrown at it. Some work was being done, then the trapping was stopped with the next lot of fires in, I think, 2006–07. They took people out of the field right at the time when the pig work needed to be done, because timing in all pest animal management is absolutely critical, and of course — boom — it was lost for that whole year. Because they are an invasive species and newly invading, it is very hard to put them in a pigeonhole like for most other pig work that has been done in Australia, because their food resource is phenomenal. They are up on all levels — depending on the type of year — on all slopes and primarily eating the ranunculus and tubers that the plants have their reserve in during the winter. In animals that have been shot and had their guts removed immediately we are also finding scrub worm in the stomach contents, in the paunch sample.

Pig is going to be a major issue once it starts to get into our farming country. They have already had one invasion into Black Mountain Station. Some locals managed to trap those animals and they have not reinvaded, but four years on the damage from that area is still very obvious. At Murrungowar last year there were two wild pigs. There was a crew from Orbost that was actually out, and these pigs came up to them. They were wild pigs. The crew fed their lunch to them until the dog trapper could come and actually shoot them, but they had obviously been seeded into lower country, which is quite common with pig shooters, especially in New South Wales. They had shooters seeding pigs into areas. It has been a very common thing. The late Mike Terry, who was the district veterinary officer, used to say that the people who do that are brainless idiots, and I think he was being a bit too kind.

The pig is now down to around the Campbell Knob Track. Nearly all of eastern Victoria, east of the Snowy, has pigs through at least half of that area. The actual mapping by the department and the work the people from the department have been doing without the resources has been very, very good. It is highly commended, but it is not getting the funds. Some funds were made available this year, but they did not even know that money was coming. They had still been planning for it and they had still been trying to deal with that issue because they realise the enormous problem that those animals are for the environment.

As for sambar and fallow deer, and any other species of deer that are turning up, we have observed sambar in all vegetation classes in Gippsland. You can track them in the snow and you can track them on the ocean beaches and anywhere in between. Ken Stuart, a farmer from Clifton Creek, shot 42 this year in one paddock that he planted to try and fatten his steers to sell at the end of winter. With locals coming in and out, he has been regularly shooting this paddock. It is about 16 acres, and there have been 42 animals taken off that.

I do not know whether you know Harry Ryder from Tawonga. Harry shoots over 100 deer on his property every year. He uses night vision scope on his rifle. He has about 8 kilometres of property boundary surrounding park and/or forest land. He really cannot farm his country unless he is shooting deer all the time.

As for the hunting community controlling the deer, they already have access in all the parks. Two years ago with my students up there, to give you an example, we found seven carcasses in one day. This was in the middle of the national park, where there is no hunting allowed — two pigs, two deer and three horses that had just been shot. The pigs' jaws had been removed, the deer's antlers had of course been removed and the three horses were together where they had been shot.

Hunting is rampant in all areas, and there is no way that is going to stop because there is nothing to police it. There is a saying in the bush that if you go into the park after 4.30 and if you are out by 9 o'clock, you are fine — nothing can happen. But even if you have got a firearm, we have had heaps of situations where rangers have issued an infringement notice against a person with a dog in a park and yet they have had a firearm and been hunting illegally but they do not take any action against the firearm because it is their policy not to deal with hunters or firearms. There is no person dealing from a government perspective in

the management of hunters on land unless it is police. They all have a policy not to be involved with firearms.

The hunters — I actually run into them quite regularly in areas that they should not be in, and they openly talk about it. I have got three photographs where we have picked them up on our cameras — three hunters in the national park that should not be there. In saying, ‘If they have access into parks, they can control the problem’, they have already got full access for as much as they want. If you are hunting for meat, you do not have to leave Healesville or Warburton and go very far — or Latrobe Valley — and you can take any amount of sambar you want to eat. If you are going to go into remote areas like the Snowy or the Alps or any of our foothill country, you are only going to be hunting a stag; you are not going to be hunting for meat to take home. Until you actually reduce your female population, you cannot get control of your population. This sambar problem is that we do not know what we are managing. We do not even know the basic science. We do not even know the home range. How can we conduct any programs like the alpine sphagnum bog wallowing by sambar when we do not even know where they are coming from and where they are moving to — very basic information? We just do not know.

As for going back to the politics of it, we continually hear about the value of this to the community but we never hear from government what the actual value of the environment is to the community, and we have to have that change. We also have to have budgeting for a long period, where we have at least five years minimum for these programs to be effective. You cannot manage pest animals with ad hoc funding.

To give you an example, about the slowest fertility rate of any animal is the horse. In the Northern Territory populations reduced by 70 per cent are back to where they were in three years. It is a little bit slower in Victoria at higher altitude, but you are certainly looking at populations back in about four years at a 70 per cent reduction. What that means is that when you put that into things like deer or you put that into pigs, which can actually have two litters every year, you are actually getting back to where you were within 12 months with most species, certainly within two years. So you have to have population reductions of massive amounts to actually be effective if you are going to have some reduction of the effects on the environment.

Another issue is the European wasp. It was first alerted to me by the late Barry Keat of Murrindal and Gelantipy — a farmer but a very good observer of the bush. He was saying that the numbers are so bad with the wasps that they attack carcasses, they attack all the spiders and a lot of the insects for meat and they even attack honey bees. And when numbers are large, like they were this year in the lower country where I come from — the Bairnsdale area — there is nothing else. Bird numbers drop off enormously. There is no food for them. You do not have spider problems around your house because the wasps have taken the spiders. We had an interesting situation where a white-browed scrubwren hit the window and died, and within 3 hours the carcass was completely devoid of any meat; it had been stripped right down to the bone. I think with this insect its demand for protein is actually causing enormous effect on the food chain for most of the bird species and probably some of the smaller mammals, as in the quoll or the small antechinus — the food source that those sorts of animals need in their food chain.

So I think it drastically needs some major study. I do not know how we are going to control it, but it is a pest that is affecting everything. We know nearly half of our bird species are now considered to be some stage of vulnerability, but what we do know is the abundance of most bird species has reduced significantly in the last 30 years. So the European wasp could be one of the corner species that are causing some of these problems, and it needs to be looked at. I will leave it there at this stage.

Mr RAMSAY — Nancy, thank you for your presentation. I am sorry, I only got off the plane from Hong Kong yesterday, so I am perhaps not quite with the bees or the wasps at the moment. The three of you have provided information to us that there is a problem in relation to horses, pigs and deer. Yet the three of you have not seen recreational shooters as perhaps a management tool that will be successful in the long term. You have all skirted around the potential impact that recreational shooters would have in reducing the number of those invasive species.

You have collectively, and this is my personal view, not come up with — and I have not read the conservation hunting program in Mitchell River National Park, which I understand you have been involved in, or the East Gippsland rainforest group have — recommendations to this committee on how to reduce the impact of the invasive species. I would perhaps ask the three of you: if it is not recreational shooting, if it is not baiting, if it is not trapping, what is it that government could do to respond to the environmental impact as well as the social impact of these invasive species?

Mr CROOK — I would start by saying that it is a complicated problem. All these animals are complicated problems, and they require integrated and complicated solutions. There is no one panacea or magic bullet, as I am sure you are aware, for any of the species, let alone them collectively, that will provide landscape-level control and mitigate their environmental impacts.

It will be, if we succeed, a whole variety of mechanisms and tools all used concurrently at the same time that will affect any kind of real population control for any of the species. Does that include recreational hunting? Yes, quite likely. But, as we have said, will recreational hunting provide the solutions by itself? No, it will not, but nor will probably any other sole mechanism, even things that were incredibly successful in the past, like myxomatosis for rabbits, which now has minimal impact on the rabbit population. Does it still have an impact? Is it still regulating populations to an extent? Yes, it is, but that extent is decreasing through time as the rabbit population develops immunity to it. We have got new viruses now that are doing their bit as well.

I think this problem as a whole, like I said, is complicated, and it will require an integrated solution that is applied for a long period of time. It will not be quick. There are no simple solutions. It is a hard problem. So I recognise your point. I do not have the answers, but I do know that, from a scientific point of view, it is an integrated pest management program that is going to provide the solutions. This is not going to be myxomatosis by itself, it is not going to be 1080 bait for pigs by itself or recreational hunting of deer by itself. It will be a combination that sees us achieve those objectives that we are after.

Mr RAMSAY — Can I put to you then would you see an integrated approach using recreational shooters and baiting for the control of wild pigs, say?

Mr BILNEY — Are you saying the two in conjunction?

Mr RAMSAY — Yes.

Mr BILNEY — No.

Mr RAMSAY — It is a bit like wild dogs. There is a whole lot of management tools you use, and baiting is only one part of it.

Mr BILNEY — That is right, but when it comes to wild pig, you cannot run the two together. If you talk to the operators in southern New South Wales, they will all tell you that whenever they have a program of trapping going on, as soon as hunters arrive it is three to four weeks before you can get back to trapping in those areas again. You cannot find where the pigs are. They take a while to settle back. I have come across a number of hunters who have shot pigs in the Snowy, for instance. They have seen a pig or two, they have fired a shot and 30 have broken out from the scrub directly underneath the one that they saw. They disperse and you do not see them again. They will come back, and they do. If you are allowing recreational hunting, you cannot be trapping at the same time. It is not going to work.

However, when a new invasive species is in very rough country, I do not think recreational hunting will ever work properly. It is going to be very, very difficult for it to have any achievement, because there are so many little gullies and valleys and head areas where they can go into. I will deal with the horse now; the horse is easy to deal with. We can deal with that in a fortnight if we have the political will, and that is either through ground shooting or helicopter shooting. To quote the late Buff Rogers, 'There is nothing easier to shoot than a horse'. They are very easy to put down from the ground or from the air. I have spoken to people who have hunted them in the Northern Territory from the air, and in Western Australia and Queensland, and it is a very easy thing to do. There are different techniques for ground shooting versus

aerial shooting. The timing is critical if you do not want to provide a major food source for wild dog. It can be done in a very short time, with all the carcasses removed.

In relation to sambar, I do not know what we do, because there is a massive population out there in all areas. I do not know even whether helicopter shooting would work, although I believe Parks in New South Wales did a very quiet trial, which they found effective in that gully or two. As for fallow deer, yes, they can be controlled, I think, probably with 1080 carrots — the good old 1080 carrots would control them. That is what used to control them in Tasmania until they stopped it. You can use the same technique for controlling hog deer. Hog deer are suckers for it, but of course in this modern day and age are we going to accept that that is acceptable? But as for sambar, I really do not know. It is a very powerful animal, a very strong animal, and it obviously moves, and moves a great deal. That is the biggest issue from that point of view. In the alps the horse is the biggest issue.

Mr RAMSAY — Just on the horses, we do seem to have consistency with everyone here is saying that the only real way we are going to control the brumbies or the wild horses is by shooting, whether it is above ground or on ground, and potentially that is by professional shooters.

Mr BILNEY — I would think so, yes.

Mr RAMSAY — And then you would have the community up in arms if the recreational shooters were shooting horses all over the place.

Mr BILNEY — Yes.

Mr RAMSAY — So we all agree on that one. You have indicated that there are a number of tools that can be used, either successfully or not, for the others.

Mr BILNEY — Yes. If there is an argument for heritage value, which I would question, but if there is, then they have to be areas where horses are to be removed from and never allowed to come back. And it has to be funded to make sure that every second year or so any incursions are removed. As for the process, it must not be recreational shooting on the horse.

Mr RAMSAY — Which leaves Nancy, and I am not clear at all how you would expect to remove some of these invasive species that you have indicated.

Dr McMURRAY — We would look to science. Some of the references that are in our report would indicate that shooting has been recommended by scientists as the best way of controlling horses. There is overwhelming evidence that recreational shooters do not effectively control invasive animals, and if we were going to be shooting, it should be by professionals. I think it would be wrong for recreational shooters to be allowed into our national parks and then seen to be a part of a program when in fact the science says they are not effective at controlling invasive species. You would be duping the community by saying, ‘Oh well, the shooters will be out there’, when there is a lot of evidence that the recreational hunting makes a problem worse in dispersing the animals.

Mr RAMSAY — You are going to liven up my colleague here in a minute. What other tools then can you use for the invasive species if it is not recreational shooting?

Dr McMURRAY — We would look to the science. The other thing that we would emphasise is that we do not know a lot of the answers about the animals, so maybe we ought to put a lot of funding into scientists who can find out a bit more about some of these animals.

Mr RAMSAY — What about putting predator animals onto invasive species?

Dr McMURRAY — There would be a lot of people who would say that we need to bring back our top predator, to put it back to manage part of the ecosystem, and it might have some impact on the deer.

Mr BILNEY — I do not know if the farmers at Yanakie want the wild dog reintroduced back onto Wilson’s prom to control the hog deer.

Mr YOUNG — We have just wolves reintroduced to the Yellowstone National Park in the States, so that could be an idea.

Mr RAMSAY — The Tasmanian tiger has been mentioned as a potential predator.

Mr BILNEY — Or the actual tiger itself could control the sambar, so it can go on.

The CHAIR — Any other introduced species seem to be disasters 100 years or 10 years later.

Mr RAMSAY — Thank you. I am sure my colleagues will respond to that.

Mr YOUNG — Nancy, I just want to go to a couple of points out of your submission. You have reinforced through your comments today that recreational hunter removes too few animals for effective management. We have had numerous comments today not just by you guys today but by previous witnesses and on other days where we have had people come and bring evidence to us that we are not going to have an impact on those invasive species unless we remove enough. We need to get to a threshold where we are removing enough to have an impact on them. Do you know of any other methods that are removing more than up to 50 000 or 60 000 sambar deer from Victoria like recreational hunters are?

Dr McMURRAY — I do not know of any yet, but the fact is that they are not making any impact. They might well be taking 50 000 or 60 000, but if that is not solving the problem, let us not pretend that it is.

Mr YOUNG — If just for a second we do not pretend that it is, how is that in itself a reason to not take 50 000 or 60 000 of those deer out of our Victorian population?

Dr McMURRAY — Because the recreational hunting has been found to exacerbate the problem, and you have the references there.

Mr YOUNG — In your submission you mentioned that the RSPCA have certain recommendations or guidelines for what they consider to be humane culling, and you have stated that it is not by recreational shooters. Can you explain to me how the RSPCA's guidelines or recommendations are different to what recreational shooters do?

Dr McMURRAY — Sorry, I did not understand the question.

Mr YOUNG — First of all, can you explain what the RSPCA's guidelines are?

Dr McMURRAY — That it would be a clean kill, and recreational hunting has been found to have high rates of wounding without killing cleanly.

Mr YOUNG — And that is based on what evidence?

Dr McMURRAY — Evidence that the RSPCA has submitted.

The CHAIR — Have you got your submission? Do you want to be able to refer to the page?

Mr YOUNG — They may be relatively vague comments but — —

The CHAIR — Do you have a copy of your submission?

Dr McMURRAY — Yes.

The CHAIR — Because sometimes if you are referring to a page, the page number — —

Dr McMURRAY — I have got my submission here. The references are there.

Mr YOUNG — I can read it off here. You have got here that:

Other studies have found aerial shooting by highly skilled professionals (not recreational hunters) to be the most effective and humane method of culling for several species, such as horses and goats.

We all know that that is not appropriate for sambar deer, obviously, and we have had evidence today to suggest that you could not do aerial culling in any sort of effective way in Victoria. What are your comments in relation to that?

Dr McMURRAY — We need to find other effective ways of dealing with sambar.

Mr YOUNG — So you would agree that professional shooters would be a humane way that would be accepted by the RSPCA guidelines?

Dr McMURRAY — They may.

Mr YOUNG — Can you explain to me how recreational shooters shoot animals any differently to professional shooters?

Dr McMURRAY — I think there is evidence that they do in terms of the amount of clean kills.

Mr YOUNG — What evidence?

Dr McMURRAY — It is evidence that is in the research articles that I have submitted to you.

Mr CROOK — You can imagine the level of formalised training could well be different. I know for the programs that I am involved with at Trust for Nature, Parks Victoria and the Australian Deer Association we have an accreditation program as part of that, where we will only allow hunters to participate in our program if they can demonstrate levels of accuracy, for example, be able to identify different vegetation forms and animals at a distance and be able to quote various rules and regulations that we have to operate under. I do not think you could say the same for every recreational hunter who decides to go out with a game licence on the weekend. So I think that probably it is fair to say there are tighter regulations and higher standards for professional shooters than there are for recreational hunters.

Dr McMURRAY — And when Parks Victoria has used shooters, they make it very clear that this is not recreational hunting, that they are trained and under strict protocols.

Mr CROOK — I will add that in some of our programs we are using recreational hunters as professionals. They are there in a voluntary capacity to assist in that control program. It is not to say that they cannot meet the same standards, but I think implying that there are the same standards with professional shooters as there are with recreational shooters is erroneous.

Mr YOUNG — Okay. Another point that you have made in here is that recreational hunting involves leaving carcasses and that that is an issue by providing food for feral animals and contaminating both water and land. Those are the words of your submission. How do you use that argument against recreational hunting whilst at the same time saying that aerial shooting is the best method, when aerial shooting leaves absolutely 100 per cent of the carcasses?

Dr McMURRAY — Yes. It does, but if the aerial shoot is an intensive shoot, it is all over a short period of time, and it can be planned within the context of other animals. So the carcasses are not left just ad hoc for a long period of time throughout the whole year.

Mr YOUNG — But they are left for whatever period of time they are left for.

Dr McMURRAY — They are left for whatever period of time; that is right.

Mr YOUNG — So it is okay to leave the carcasses when we are doing aerial shooting but not with recreational shooting?

Dr McMURRAY — They are left. To my knowledge the carcasses are left, and unless you want to institute a program whereby the carcasses are retrieved or used, then they are left.

Mr CROOK — I think they did that in New Zealand, didn't they?

Mr YOUNG — It has been done in various ways all around the world.

Mr CROOK — It is obviously pretty extensive.

Mr YOUNG — There are carry-out laws in many places. There are places where you have to take the meat out, by law, and things like that. So, yes, it has been done.

Mr CROOK — Is it within the frame of reference for this committee to look at the impact that left carcasses has? Is that something that you guys are considering?

Mr YOUNG — We have heard some evidence about it. The evidence about it has been a little bit sporadic — only as it comes up — but we have heard some.

Mr BILNEY — You are referring to the Forsyth paper there on the carcasses put in the north-east, are you?

Mr YOUNG — Sorry?

Mr BILNEY — When you are talking about the evidence of other animals feeding on the carcass remains, are you referring to the Forsyth paper that was published 18 months ago?

Mr YOUNG — No. I am just reading Dr McMurray's submission.

The CHAIR — We received the information about that at one of our earlier hearings. Yes, I remember that.

Mr YOUNG — From a shooting perspective, I dare say you will find that it is a very small percentage that leave carcasses. We do know that shooters take 50 000 to 60 000 deer a year, and if there were 50 000 to 60 000 carcasses left rotting around in Victoria every year, I reckon we would know about it. So I think that might be an over-exaggeration of that issue.

Mr BILNEY — Can I challenge you on that point?

Mr YOUNG — Absolutely.

Mr BILNEY — I find carcasses all the time. Now, they may not be people who claim to be hunters. They may even be recreational spotlighters, but I have given up counting the number of carcasses that I find — and I do not get around the bush like I used to. I mentioned the seven in one day and animals on the side of the road. The number that are shot on people's properties that are left to rot is incredible. The numbers that you see on the side of the road hit by vehicles that are left there — no, I dispute that.

Mr YOUNG — Fifty thousand a year.

Mr BILNEY — No. There is an enormous number of animals being left in the bush. If you can shoot an animal in your back paddock and have that for meat, why when you then chase a stag for 6 or 8 kilometres or whatever are you going to cart all that meat out, almost black meat?

Mr YOUNG — No, absolutely. We are not suggesting that all of them get taken out, but what we are getting from Ms McMurray's evidence is the feeling that she thinks most of them are left there, and it is simply untrue.

Mr BILNEY — Nearly every hog deer I saw poached in the coastal areas, there was always a carcass left behind. There was never any meat taken. Occasionally some back straps would be taken.

Mr YOUNG — And poaching is very different to hunting. I will come back to your comments in a second.

Mr BILNEY — Yes. It still is hunting in the terms.

Mr YOUNG — I absolutely will come back to your comments in a minute, but just for now, Ms McMurray, you talked about the cost of prevention for wild dog attacks on stock and that that should be borne by the owner of the stock. Do you think that is fair? Do you honestly think that is fair, when they are not the cause of the problem?

Dr McMURRAY — I think anybody who has an asset needs to be prepared to protect that asset, and they are not giving back to the community when they make a profit. Are they giving back to the community, saying, ‘There is your share, because we looked at this together’? I mean, there is something you could think about.

Mr YOUNG — You talked a lot about funding for research and funding for pest control and funding for an independent auditor and all sorts of things, and we should be pouring exorbitant amounts of money into that. Do you think it is fair that people who are not trying to protect that asset should have to pay for it? For example, should my taxes pay for the protection of a forest or wetland down here?

Mr CROOK — Well, they do currently.

Mr YOUNG — That is right.

Mr CROOK — Or that is certainly the idea.

Dr McMURRAY — Yes, the biodiversity belongs to everybody and it underpins everything.

Mr CROOK — Because that is a state asset, you would say that is a public good. Whereas I think Nancy is saying that is a private enterprise that is being — —

Mr YOUNG — So it is fair for me to pay to protect a state asset, but when a state asset is having an effect on a private person or their business we ask them to pay for it and it is not fair for the public to be paying for that as well?

Mr CROOK — Is it equally fair to ask those sectors of the community that wish to continue hunting deer to pay for the damage they are doing to the rainforest communities, which are a public asset in the same vein?

Mr RAMSAY — So you are putting environmental protection over and above anything else?

Mr CROOK — I am not, no.

Dr McMURRAY — But I am.

Mr RAMSAY — No, but I think Nancy’s submission indicated that.

Mr CROOK — But I would certainly agree with Nancy’s assertion that the environment per se underpins our economy, and without it we do not have one.

Mr RAMSAY — She has gone further than that. In fact she is advocating for the removal of any sort of government support for control of invasive species that have an impact on private commercial operations, whether it be a farmer or anyone else. We already have funding available to control wild dogs. If you took Nancy’s literal interpretation, she would say that the taxpayer should not be funding wild dog control where it impacts on private enterprise. In fact you are trying to legitimise the argument yourself. I am just wondering what you would say to all those farmers across Victoria and Australia — —

The CHAIR — I do not think that is what was being said.

Mr RAMSAY — I think it is where we are heading.

Mr YOUNG — Just finally, Mr Bilney, you have given us a wide array of examples of things you have seen out in the bush. You have obviously spent a lot of time out there, and I have no doubt that you have a lot of knowledge on that. I think it is absolutely ridiculous the assertions that you made as far as hunters having absolute access to all areas because of a few examples that you have seen of poachers illegally hunting or not even hunting, just illegally, or not even illegally possibly — just in national parks — that you believe should not be there. To say that we as hunters have unrestricted access or anything of the like is quite ridiculous.

Mr CROOK — I cannot think of a single national park where I have not seen hunting activity occurring, whether it is legalised or not.

Mr YOUNG — Well, legal and illegal are very different.

Mr CROOK — That sounds like fairly unfettered access.

Mr BILNEY — When you have a park that is closed to all hunting, then I consider that to be illegal hunting. I have come across numerous examples of animals shot in national parks where hunting is not allowed. What I am saying is that it is already going on. The chances of being caught or infringing on it are almost non-existent unless police are involved with the patrol, so that is what they work on. I am not saying the whole hunting community are hunting in national parks, but what I am saying is they have already got access to national parks.

Mr YOUNG — Who does?

Mr BILNEY — Hunters.

Mr YOUNG — Illegal hunters?

Mr BILNEY — Hunters are hunting in national parks.

Mr YOUNG — Illegal hunters have access? You are talking about a minority. You just said it again, that you are not saying that all hunters have access. At the same time you are saying that hunters are illegally hunting in all national parks.

Mr BILNEY — But the legitimate hunters are being denied access, if you want to put it that way.

Mr YOUNG — That is a much better way to phrase it.

Mr BILNEY — All I am saying is that it is going on, and in some areas it is quite rampant. If I can take you on on the issue of 60 000 deer being taken has done some value, you cannot make that claim if you do not know what the population is. I can put the reverse argument that you are making the problem worse because you are taking up that certain percentage that is allowing the remaining population to be stronger, to be more fertile and to produce more calves — there are signs of that as well — until you can get to a certain point. It depends on the species, and the foxes are a good example.

Mr RAMSAY — I was going to say that. They use the fox bounties as an example.

Mr YOUNG — By the same token you cannot make clear your assertions that we are having a negative impact if we do not know the same — —

Mr BILNEY — That is exactly right. The hunting community continually make that claim of 60 000 deer or whatever. It must be doing something, because it is the same as the fox argument that 160 000 foxes are doing some good.

Mr CROOK — Can we all agree that a population estimate of some of these invasive species would be a good starting point?

Mr YOUNG — Absolutely we can all agree on that.

Mr BILNEY — If you want to have a \$10 bounty for political reasons, that is fine. The \$100 bounty on dogs was achieving a lot more than the fox one ever would, because if you look at the figures and if you look at the area of Victoria in relation to foxes, we are actually once again probably making the problem worse, because the population has never settled down. The sump effect is continually operating; the young are stronger. We know that fox litters are quite large nowadays. It was certainly the case with wild dog. Wild dog litters are larger than has ever been known, and the dogs themselves are healthier than has ever been known. So what is going on out there?

Mr YOUNG — But until we know those overarching figures that will make all of the answers clear, the assertion that hunting is having a negative impact is just as moot as the new claim hunters are making that we do.

Mr BILNEY — But I never made the original claim they must be doing something.

Mr YOUNG — I am not saying you did.

Mr BILNEY — But it has come from the hunting community.

Mr YOUNG — I am not saying you did. But the point remains that until we have some sort of scientific input into estimating the actual extent of this problem then we cannot say that hunting is not having a positive impact.

Mr BILNEY — That is right.

Mr CROOK — We need some basic data so we can make some educated evaluations about what is effective and what is not. If we all agree there is a problem but we do not have that baseline information, we cannot actually make any educated assertions as to what works and what does not. So let us see that come out of this inquiry, please.

Mr YOUNG — Absolutely.

Mr CROOK — Let us have some scientifically based population assessments for the key species we have all been talking about all day, because at the moment we do not have that information.

Mr YOUNG — Absolutely. That has come up numerous times and is something that has been advocated for by both sides of this argument — that we need more research. But I have to say, based on McMurray's assertions, anyone who does not have a sambar problem should not be paying for that research.

The CHAIR — Can I ask a couple of things? I think one of the things that we will also get out of this inquiry is that the problem is almost sort of overwhelming. There are pigs, horses, deer and wild dogs. I suppose this is to all of you, in a way. The first step is the research, but in terms of coordination and trying to work it out, are there particular types of eradication that are better than others, or do we look at the type of animal first? For example, you were talking about the horses, and I am assuming the political question is that everyone likes horses and whatever.

Mr BILNEY — That is why we call them wild horses. We do not call them brumbies anymore.

The CHAIR — Yes. Good idea. In terms of recommendations that this committee could make and some of the first steps — the research, yes, we need that. But what is the next step? Do we look at a particular animal and start with that?

Mr BILNEY — Can I give you a bit of history?

The CHAIR — Sure.

Mr BILNEY — We have seen a significant decline in pest animal management in Victoria since the mid-80s, since the Labor government of — —

The CHAIR — Yes, we have heard that.

Mr BILNEY — There were offices that used to be available to do that. Maybe it was the old Lands Department days and they probably may not have been effective, but there was a very concerted effort to control animals and certain plants. As the plants become too invasive they then get downgraded and we forget about them. Blackberry is a good example. But we have continually downgraded the importance of pest animals in the environment since, and that has been 30-odd years, and we have lost that focus.

The department and Parks are still identifying a lot of the issues that just never get anywhere out of the system or they do not get into the political realm to deal with it. My criticism of the politics is that you can use all of the words, but until you actually have a commitment to it we are not going to achieve these things. We need more money in pest animal or invasive species — whatever name you want to call it — control, and it has to be more continual funding.

Mr CROOK — For all the existing land management agencies.

Mr BILNEY — Yes, because otherwise we will shut up shop.

The CHAIR — I think there are a lot of ad hoc grants. People can apply for a grant to do something here or there. If we get rid of that idea and we fund the departments and then through advisory councils, how do we manage that in terms of —

Mr BILNEY — Species by species.

The CHAIR — community consultation and locals' input?

Mr BILNEY — If we go back to the pig, I think pig is the best example. If you are not doing anything on pig, then you have got no reason for doing anything, because we all accept that if it is going to affect agriculture, it affects the environment. If we ever get a pathogen into this country like foot-and-mouth, you can kiss it goodnight. But then again, that is for all cloven-hoofed animals. If you are ever worried about mental health issues, just wait until we get something like that in the country. Do not forget there were about 9.5 million Australian citizens who left short-term last year from Australia. That is 9.5 million chances of something being brought in by Australian citizens — not tourists — into this country, and that is always a threat to us. There is a CSIRO report that I think comes out every decade, and the number of pathogens coming into this country is increasing with every decade. So it is not a case of if, it is always a case of when. We have already got the vectors sitting up there ready to go.

The CHAIR — The other question I just had was for Nancy about the issue that the emphasis should be on protecting biodiversity, not just controlling invasive animals. I was not sure whether there is a different way. What do you mean by that?

Dr Mc MURRAY — I think all the evidence says that we need an integrated approach and a landscape approach. You can go in and you can target one particular animal, but if you do not understand what the consequences of that will be, you can spend a lot of money and a lot of effort targeting one particular species with very little biodiversity outcomes. So if the outcomes are a healthy biodiversity and a healthy landscape, then we need to be looking at that as an outcome as well as lower numbers.

Mr YOUNG — Since we have still got a little bit of time, if I may. Mr Bilney, you mentioned a trial by the New South Wales government to aerial cull sambar, but you were a little hazy on where that went.

Mr BILNEY — Because it was kept very quiet.

Mr YOUNG — Those were the words you used.

Mr BILNEY — And I do not know the terrain that it was carried out in. Because they have their own helicopter, they obviously must have done a shoot, because they do shooting, as you know, in different areas. This goes back about 12 or 14 years when I was doing a fair bit of work for New South Wales national parks. I was told at the time. I think it was operated out at Khancoban, where they did a trial. But it

has been kept very quiet. They were quite happy with the result. But that could be very variable, not forgetting that the animal can learn very quickly what that noise can mean, so the success of a one-off operation does not necessarily mean it would carry through to a broader scale. A lot of the scrub and bush that I know, you probably would not even know if there were 50 sambar in there. You would not know.

Mr YOUNG — Do you know why it was kept quiet?

Mr BILNEY — Because probably they did not either want the hunting community or whatever to know about it. I am not sure. But it is out there.

I just want to say one other thing on the pig issue. I just want to reiterate that because it is a new invading species it is not behaving the same as the pig work that has been done. The PIGOUT bait was developed in southern Queensland. It is in pigs in an environment that they have been in for 100 years, and the baits that they will take will be very, very different from those of an animal that is in a new environment where there have been no pigs before. Pigs have enormous food resources, so we have got to be quite a bit smarter when we are trapping and dealing with those sorts of situations.

The CHAIR — I have just one other question, and that is in terms of research and money. How much research is required, and how do you balance the eradicating of the animals with the research to find out what needs to be done?

Mr BILNEY — In pest animal management we do not use the word ‘eradicate’.

The CHAIR — Yes, that is right. Manage — sorry, control.

Mr BILNEY — The different levels of control.

The CHAIR — I should know that. We have talked about that before. You cannot eradicate.

Mr BILNEY — That is alright. So we go to high levels of control or no control and whatever. That is what has to be determined on a species by species basis, and then you would try and fund accordingly.

The CHAIR — Thank you very much for coming in and presenting today. I hope you did not mind some of the difficult questions, but we need to express all views.

Mr CROOK — That is what it is all about.

Witnesses withdrew.