

First Plenary Debate: fruit and flying-foxes in the 21st century

Chair: Shelley Burgin

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SHELLEY BURGIN: We are now going to go into the first of the two plenary sessions for today. Firstly, we are calling for any questions to any of the speakers we have had this morning; secondly, we are moving into some themes that explore managing Grey-headed Flying-foxes under the *Threatened Species Conservation Act 1995*. Should we revise values, or revise the rules? Here we need to consider the implications for fruit-growers and for the flying-foxes themselves. Is shooting an effective tool for protection of crops? Illegal shooting - is there a case to answer here? Finally, what information is needed?

CHRIS TIDEMANN (Australian National University): I have a question for Brian McLachlan, or the National Parks and Wildlife Service in general. Why is there an insistence on number 4 lead shot for the shooting of flying foxes?

BRIAN McLACHLAN (NPWS): I am not a ballistics expert, but I think that it is something that the Service has come up with in consultation with relevant experts. We have had many years of duck shooting, for example, that has led the way to certain restrictions on what type of shot to use. That was deemed to be the best and most suitable for humane destruction.

CHRIS TIDEMANN: The question I'm posing is this: "Is it sensible to be trying to kill these animals?" I very much doubt that number 4 lead shot would kill them all under any circumstances any way. Might it be more sensible to consider using either smaller lead shot, which would hurt them but would not kill them - give them an opportunity perhaps to learn - and I am aware of trials that have been done in the Northern Territory using small, plastic beads, which hurt them, give them a message, but does not kill them. I am just posing it as a question for discussion.

BRIAN McLACHLAN: We are happy to take on those comments. I have not been

directly involved in that decision-making process. At a local level we advocate the use of blank ammo, just to make a noise. That works, as well as scare shooting. There are a few other types of cartridges called bird-fright cartridges that are used at airports to scare birds off the runway. That has had some success, although they are very expensive.

MARTIN SMITH (NPWS): Mr Comensoli alluded to netting having a negative effect on budding fruit and also possibly on the fruit colour. I was wondering whether or not that would be a species-specific impact on fruit, or whether it is universal across most of the crops.

PETER COMENSOLI: Our fruit crops are low chill stone fruit. They're flowering right now. At the moment the sun is low in the northern sky and what you get is a shading effect from the grid of the net above the trees. Now, there is less of an effect in Queensland where the sun is about six to eight degrees higher. The effect of shading is an effect on fruit colour and it also causes rangy growth. If the growth has been expected - by the shading early in the season - to extend its internodal length and so become quite large, it shades the fruit itself. So it is what is happening as a result of netting right now. That is the problem.

There is another issue that the question allows me to raise, and it is the cost of the structure that I would require for a 40-mm net as advocated by John Gough. I will catch hail in that 40-mm grid and I don't want the thing collapsing on my crop.

GLENN HOYE (Fly By Night bat surveys): I had a similar question. Has anyone ever thought of transparent netting, in the sense that it tends to be always black, and is it possible to develop netting that is transparent and so allows more light through?

PETER COMENSOLI: The netting that I was just describing is, I am told, as transparent as is available. It is no longer black - there is a black thread in some hail netting, which is a

carbon thread, but that is pretty damn expensive and usually not used. So, as much as possible, the impact of light has been diminished, but we are talking about problems of southern latitudes. So what you are suggesting might work on the equator, but it does not work down here.

GLENN HOYE: It was stated earlier that high losses of bananas occur in the northern areas. Is it possible to have bags that would stop flying-foxes getting at the bananas?

JOHN ROGERS: No, it is not. They are double-bagging bananas now on the north coast and the bats are still going through them. The bats are able to scratch them, scrape them open and get to the fruit inside.

GLENN HOYE: Would it be possible to design bags that they can't scratch open?

JOHN ROGERS: I am not an expert on the banana industry, but two bags are very tough. It is a fair degree of coverage.

RICHARD GOULD (Safe Australia): My question is about the illegal shooting that was brought up by Brian McLachlan. In 1996-97 we conducted surveys of shooters in orchards, in their environment, and we found on those occasions there was no coverage by National Parks and Wildlife Service within the actual survey areas. But the shoots averaged anything from 11 to about 23 shot dead in a single night. This was repeated night after night after night. If we are to install a regime that is supposed to protect the flying foxes, then what type of policing is actually occurring with these shoots? These shoots don't go to 150, they go to the multi thousands of animals over a season. How was this really policed historically, and are they expecting to use it as a future form of management?

PETER COMENSOLI: I'm a fruit-grower. I'll answer that question but I would like the National Parks and Wildlife Service to answer it as well. We have a form that is required to be produced at the end of each fruit season. I have to provide it by the end of March to our local National Parks and Wildlife manager. There is this allegation about the honesty of fruit-growers that I think belongs to a former era. We are hypersensitive to the type of debate that is going on in this room today, and not putting in correct data or not putting in forms at all, is something that we are far away from. You have to identify the cost of culling. The

grower does not have some sport going on each stone fruit season shooting these things. There is an increasing community requirement to be honest in that process. I admit that once it probably was not, but it is right there in front of us now, and today indicates that. The second thing is that there is policing required. If I did not put in that form, or if I did put it in and it was checked later to be inaccurate, then I would be in court.

RICHARD GOULD: Who is policing it? Has the National Parks and Wildlife Service actually charged anybody? In the period of time that they have had the licensing in place, has anybody been charged and, if so, under what circumstances?

GRAHAM WILSON (NPWS): In terms of the history, there is a problem, but I think Peter Comensoli has made an excellent point about the fact that there are changing circumstances. Clearly, the listing of this species as threatened means that we have to take this matter a lot more seriously than might have been done a few years ago. The fact that the compliance has gone up from about 40 to 60 per cent shows there is a trend of improvement. I understand there have been legal investigations over some breaches. I cannot give you any more detail off the top of my head.

GWEN PARRY-JONES (Wambina Flying Fox Education Research Centre): What is the criteria for obtaining a licence to shoot? I live in the Gosford area and I know of several people who only have hobby farms and yet they get licences to shoot. Have you got to present your taxation record, or something like that, to say that it is your principal source of revenue?

KELLY WAPLES (NPWS): The policy now is that anyone can put in an application for a licence, which means a farmer has to fill out the information on that licence which includes the type of crop, the area that it covers and the damage that has been occurring. There has to be a property inspection to ensure that damage is actually occurring on that property. Then a licence can be issued at the discretion of the NPWS area office.

GWEN PARRY-JONES: But it does not have to be the principal source of revenue?

KELLY WAPLES: No, it does not. If somebody has a property that can show

damage, a licence can be issued at the discretion of the area office.

GREG RICHARDS (Consultant): I am concerned about the point that in New South Wales there seems to be - from the morning's talks - a responsibility for the National Parks and Wildlife Service to fix everything. There are a few players I consider that are standing in the background. This comes out when we hear, through Sandy Teagle's talk, about what is happening in Queensland. Instead of putting the onus on National Parks and Wildlife Service to manage under the Act, which they know how to do already since they have come up with some plans - I have some questions for the agricultural departments. Why is it that Queensland DPI can put money in, and yet we hear this morning that New South Wales Agriculture has no money. We have heard the extent of the losses - \$10 million or so per year. Why can't New South Wales Agriculture put \$1 million in now to kick off the requirements and consider the implications for fruit-growers, and in doing so, consider the implications for flying foxes?

SHELLEY BURGIN: I think the short answer is that it is not in the budget. How you get it into the budget is another matter.

JIM SHIELDS (State Forests): I am not going to answer that question, but I am going to continue on with the theme of another major missing partner, which is the major beneficiary in economic terms of the food industry. The Coles-Myer retail chain makes money from this enterprise. Administering the *Threatened Species Conservation Act* is relatively simple. There are effective means for controlling the problem and it is relatively easy to police; it just costs too much money. It is easy to police people shooting firearms at night, but it is expensive.

So the question is, where will all the money come from and who is responsible for paying it? I would say, to a large extent, the people who make the most money from the situation are responsible.

COLIN BOWER (NSW Agriculture): My answer to the question on responsibility is that New South Wales Agriculture in the 1980s certainly did a large amount of research. We also organised a large number of meetings and conducted a large number of surveys. The outcome of all that work was the conclusion

that exclusion netting was really the only way to go. Since that time we have not seen anything which would make us want to change our mind. So essentially, we have done our work and reached our conclusions. I should add that we are represented on the Queensland consultative committee and are watching what is going on over the border. As soon as anything promising comes out of that program we will be in there and helping to implement it with our growers.

CHRIS ALLEN (University of Sydney): I would like to propose an amendment to the Firearms Act so that there is a requirement that a person demonstrate that they have pests on their property so they can be granted a licence which is conditional on them having pests on their property. That licence should be able to be ongoing, but a second requirement is that firearms be kept off the property until such a time as it is demonstrated that pests are on it. So there needs to be a rapid response. If the licence is in place they just need to demonstrate that the firearm is required to remove the pests that are on that property at that time. At the moment there seems to be too much indiscriminate shooting of animals by people who are not going to get a flying-fox licence.

JOHN ROGERS: The claim is consistently made that there is large-scale indiscriminate shooting. The level of prosecutions by the National Parks and Wildlife Service for this offence are so slight as to wonder to what extent it is really occurring. Obviously there is some indiscriminate or illegal shooting that takes place. Obviously people are losing their crops and their livelihoods and may resort to desperate measures, but the extent of it as depicted today is simply ridiculous. Most horticulturalists live in areas where we are in very close proximity to rural residential encroachment. It is extremely difficult, and I would say in my area almost impossible, to shoot illegally. If you did it consistently you would be brought to the attention of the authorities and you would be examined. It would be a ludicrous proposition for us as an industry and as farmers to undertake such a stupid act. It may occur, but it does not occur in the widespread way that is being suggested today.

SHELLEY BURGIN: Is shooting an effective tool for protecting crops?

JOHN GOUGH (fruit-grower): My answer to that is no. All we do is pick up dead bats, injured bats, little babies and the silly part about it is - as my friend over here from the National Parks and Wildlife Service said - they are copping it two ways. They give licences to shoot and then supporting the WIRES rescue service to put the bats back in the air. It does not pay. It is frustrating. I cannot go with it that it does any good at all.

JOHN BICKNELL (Orchardist): Yes, shooting does work but you have to be walking around the orchard and you do not shoot every bloody bat that comes over. All you have to do is shoot now and then. In the 40 or so years that I have been an orchardist I would not have shot even 100 flying-foxes, nowhere near 100, but I have a very small orchard. If you go around the orchard you have to keep moving and disturbing the flying-foxes and you have to do it over an extended period of time. But if you do shoot a flying-fox we try to make sure that it is the scouts. We get the scouts and the other ones are dissuaded from coming to our properties.

RICHARD GOULD (SAFE Australia): As a wildlife rescue group we have witnessed and have actually attended - unknown to shooters and farmers - many, many shoots. I agree with John. I do not think the shooting does stop flying-foxes coming in. What it does do usually is they will go out for about an hour and a half to two hours and shoot. They will shoot a few of the flying-foxes. But if they observe the orchards afterwards there would have been just as many flying-foxes in the orchard. Does it actually deter them from the orchard? I don't think so in the long term unless, as you say, you have got to be there nearly all night protecting your crop, and that just does not happen.

SANDY TEAGLE (Department of Primary Industries in Queensland): Certainly from the survey that we did we got a mixed response to whether or not shooting was an effective method. I think under low pressure there was a greater response saying that it was effective, but when you have high pressure from flying-foxes, large numbers coming in, most people certainly said that it was not effective in that circumstance. So it really comes down to what the individual orchard situation is and what the pressure is from the flying-foxes.

PETER COMENSOLI: I think shooting is effective if you are shooting early and if you are diverting scouts. If you are trying to save your crop from a huge population of flying foxes, which we witnessed last year, shooting is futile, but what else is there that fits the prescription for financial responsibility that we have available to us at the moment, given the cost of netting and other variables and the reluctance to spend money on researching alternatives? I said in my speech and I say again, I think there is a great role here for the parks service to get out and talk with the growers, some of whom are in this room, but most of whom are not, and talk to them about what they have done. There are all sorts of things from smoke through to alarms that have been trialled with varying degrees of success and I think there is a range of options between shooting and netting that have not even been investigated. As for my friend up the back here that has got all these results, why don't you put those growers in jail, mate?

RICHARD GOULD: I'd love to.

SHELLEY BURGIN: What information do we need to move forward?

JOHN BICKNELL: I have put forward quite a few ways of going as far as research into aversion agents are concerned. I shall read it out because I did not read it out in my address:

Probably the quickest method of aversion agent to implement would be fright.

Chris (Tidemann) has brought that up:

Shotgun shells can easily be converted to shells containing low-density biodegradable two-millimetre feeds which will, when fired, scare the flying-fox, not kill it. The present requirement is for orchardists to use number 4 shot which will kill them outright.

We don't want to do that. We're not teaching them a bloody lesson.

A frightened flying-fox will go back to its camp and communicate to other flying-foxes, "a no-go area".

You've just got to hit a good number of them, all right.

It is well known that flying-fox do not like smoke. Smoke from bushfires spells danger as well as being an uncomfortable experience

for flying-fox unlike other smells, which they would probably be quite used to in their colonies - like the hydrogen sulphide.

There has been much research into smoke and smoking of tobacco on a human level over the years. Those researchers could possibly be redirected into smoke-based aversion agents, keeping in mind that flying fox have an exponentially greater olfactory sense than do human beings which could be used to human advantage. Perhaps smoke pipes used to suppress frost could be modified as a flying-fox aversion agent.

There are other ones that I have included in my presentation here that you may like to read on the Internet.

JANE MULLER (Queensland Fruit and Vegetable Growers): I think we need better information about nets. We have heard from too many farmers that they are nervous about netting because of the issues of shading, increased humidity and those sorts of things. We have to get real about flying foxes so we have got to resource the information needs. We need better information about nets, good research on deterrents, and there is a range of things we need to do there. The other thing that we desperately need is support for our growers to get those nets up because they really are too expensive.

HUME FIELD (Queensland DPI): I hesitate to ask this question because it is outside my area of expertise. It strikes me that if we are saying that flying-foxes are feeding in horticultural orchards we are only looking at half the problem until we address the reason why they are doing that. If we are protecting the orchards, and excluding flying-foxes from them, then what is the food resource left for the flying-foxes? Are we concerned about what is happening there? Is that part of the problem?

KERRY PARRY-JONES (University of Sydney): I know quite a few of you probably won't believe me, but really stone fruit is a very small proportion of the diet available in Sydney. It is not a particularly favoured source. It is a subsidiary source that is used when generally the banksias stop flowering, which they do in Sydney about every couple of years. They do not have a particularly good flowering date. So it is not a major

source of food in the Sydney area. It may be elsewhere where habitat destruction is worse, but I can say for certain that in Sydney it is a very minor, and generally used for a couple of weeks a year maximum by a few of the many bats in the Sydney area.

PEGGY EBY: I would like to add to the discussion about planting decoy trees around crops. In my view, what we are really looking for is providing a reasonable-sized resource elsewhere. A more sensible option would be to look at the times of year when we have problems, then look at the resources that used to be available at those times. We need to come up with a strategy for replanting those areas, not areas next to fruit crops.

SHELLEY BURGIN: We're almost there. Everybody's got their hand up. There's a lady up here who has not spoken before. You guys can have another go in the next plenary session. We're almost at an end, I'm sorry. Would you stand up and state your name please.

MEL ZEPPEL (Australian Museum): One of the main threats to flying-foxes is habitat clearance yet we have been talking about stone fruits and things. Are there any guidelines about protecting the clearing of the fruiting trees or the flowering trees? Ecological consultants could recommend to developers not to clear those, but without legal incentives I do not think many developers would be interested.

JIM SHIELDS (State Forests of NSW): What we need is for Len Martin to complete his life-table and be able to tell us the end-size population that we need to have successful management. That is one bit of information that we need. How many flying foxes are enough? The other question we need to address is conservation with regard to land clearance, as our colleague from the museum indicated. These are two bits of information we really need.

SHELLEY BURGIN: It is time to close for lunch.