

TRANSCRIPT

SELECT COMMITTEE ON VICTORIA'S RECREATIONAL NATIVE BIRD HUNTING ARRANGEMENTS

Inquiry into Victoria's Recreational Native Bird Hunting Arrangements

Melbourne – Friday 26 May 2023

MEMBERS

Ryan Batchelor – Chair

Michael Galea – Deputy Chair

Melina Bath

Jeff Bourman

Katherine Copsey

Bev McArthur

Evan Mulholland

Georgie Purcell

Sheena Watt

WITNESS (*via videoconference*)

Dr Brian Hiller.

The CHAIR: Welcome, Dr Hiller. I will just read out a brief statement.

All evidence that we are taking today is protected by parliamentary privilege as provided by the *Constitution Act 1975* and provisions of the Legislative Council standing orders. Therefore the information you provide during the hearing is protected by law. You are protected against any action for what you say during this hearing, but if you go elsewhere and repeat the same things, those comments may not be protected by this privilege. Any deliberately false evidence or misleading of the committee may be considered a contempt of Parliament.

All evidence is being recorded, and you will be provided with a proof version of the transcript following the hearing. Transcripts will ultimately be made public and posted on the committee's website.

For the Hansard record, can you please state your name and any organisation you are appearing on behalf of.

Brian HILLER: My name is Dr Brian Hiller, and I am a professor of wildlife biology at Bemidji State University. That is my affiliation.

The CHAIR: Wonderful. Just to give you a sense of how we are going to conduct proceedings: I will invite you shortly to make an opening statement, and then members of the committee, who I will get to introduce themselves prior to asking questions, will take it in turns to ask you questions in roughly 5-minute blocks, although that varies depending on how many of us there are at any given point in time. If you would like to make an opening statement of about 5 minutes, that would be great.

Brian HILLER: I do not know that it is going to go for 5 minutes.

The CHAIR: Excellent.

Brian HILLER: You have all read my submission, so I will just give a bit of background on me and where I come from. My background is a bachelor's degree, a four-year degree, in wildlife biology from the University of Vermont. I hold a masters degree in education from my current university that I work at – from many years ago. I also hold a masters degree in wildlife management from the University of Connecticut, and I hold a PhD from the University of Connecticut in wildlife management as well.

My current role and position is as a full tenured professor of wildlife biology and wildlife management at Bemidji State University, where my role is primarily one of educating future wildlife managers in the theory and the practices of wildlife management. In that role I have been responsible for developing I want to say 16 different courses at this point in the last decade, give or take, and they range from introductory courses in things like general ecology and principles of wildlife management all the way up to advanced graduate courses in wildlife management techniques. I am primarily responsible for undergraduate education, although this university also has a limited masters program as well, so I also have five active masters students.

My role and my interest in this particular proceeding is one as a wildlife manager and someone who is interested in waterfowl from a long-term perspective. I am interested in the scientific management of waterfowl and wildlife populations in general, but waterfowl specifically, and that is really where my interest lies. My connection to it is that I am married to an Australian, and as a permanent Australian resident I spend some time down there and enjoy spending a lot of time around waterways.

The CHAIR: Thanks. And you are joining us from another part of the world – is that right?

Brian HILLER: I am 12,500 miles away from you currently, in Bemidji, Minnesota.

The CHAIR: That is commitment. And so people will recall, we met you, though, in person at Connewarre.

Brian HILLER: Correct.

The CHAIR: I might just ask members of the committee to introduce themselves. Ryan Batchelor, I am Chair of the committee and Member for Southern Metropolitan.

Katherine COPSEY: Katherine Copsey, Member for Southern Metropolitan.

Georgie PURCELL: Georgie Purcell, Member for Northern Victoria.

Michael GALEA: Michael Galea, Deputy Chair and Member for South-Eastern Metropolitan.

Melina BATH: Melina Bath, Member for Eastern Victoria Region.

Bev McARTHUR: Bev McArthur, Member for Western Victoria Region.

Jeff BOURMAN: And Jeff Bourman, Member for Eastern Region of Victoria. Good to see you again, Dr Hiller.

Brian HILLER: It is nice to see most of you all again – some of you for the first time.

The CHAIR: And Sheena Watt will be back joining us; she has just stepped out of the room briefly.

Brian HILLER: That is certainly fine.

The CHAIR: As I said, we have got blocks of time. I am going to start. We had a long conversation earlier and a lot of evidence earlier today regarding wildlife ecology and particularly bird numbers. And the evidence we had this morning was that the eastern Australian waterbird survey suggests that there has obviously been a long-term decline in bird numbers and that the factors that are influencing those numbers range from – in the evidence we heard this morning – largely land use and long-term climate rather than seasonal rainfall as being the driving force behind abundance of birds. I just wondered if you had a view and any evidence that you would like to lead on the factors that contribute to bird populations and their abundance and sustainability.

Brian HILLER: There are a couple of issues. Again, the eastern Australian waterbird survey is honestly the longest running dataset you have – it is nearly 40 years old – and one of the challenges with that is that you want to maintain continuity, right, so you want to do the same thing year after year after year, and they have done a wonderful job of that. And I look at some of the data, and again I look at the most recent waterbird estimate where you see – I am looking at chestnut teal in particular – you know, they counted a total of 38 birds. I saw 38 birds in multiple individual flocks in every wetland that I visited throughout my time in Australia. So I think there are some challenges that go along with that when you look at how different species' ecology works.

You know, earlier some of the folks that you have spoken to already talked about how pink-eared ducks in particular will congregate in very large numbers in certain places. Well, if you happen to be counting and you happen to have a survey band that runs over that spot, you are going to count a lot of pink-eared ducks. But if they happen to be off to the side of that, they may not be counted as well or as easily. And things like chestnut teal that rely on typically more coastal, more permanent wetlands – the Coorong, the Gippsland Lakes et cetera, some of the south-eastern lakes in South Australia – that is their home core territory, so if your survey routes do not cover that, then you are going to miss out on some of those things. And I think the chestnut teal is a good example of that.

The CHAIR: Just on that question, is there any alternative evidence that you have got about our bird population numbers over time?

Brian HILLER: That is one of the biggest challenges. Dr Kingsford and Dr Klaassen both mentioned that earlier in that there are very large gaps in data that any wildlife biologist and any population ecologist would love to have. And one of the challenges you have is that this has been set up in a certain way, and it does not necessarily cover all the spots that it needs to cover. And even if it did, there are other factors that need to go into managing a wild population like this – things like what was the breeding like in a given year? What was the harvest like in a given year? What was the post-harvest population looking like in a given year? So having series of data points over the course of a given six-month, eight-month period, would allow your model to fill in some of those gaps a little bit better.

The CHAIR: Do you think that data exists?

Brian HILLER: I do not believe that exists in Australia.

The CHAIR: So how do you think we make an assessment of the abundance of birds and the sustainability of practices that impact on their populations?

Brian HILLER: I think that is one of the challenges that you have. The thing that I was seeing on the ground when I was there, visiting the various places that I visited – the Coorong's south-east lakes, the Gippsland Lakes – was that birds were abundant. They are clearly not being counted in some parts of that, so I think some additional data needs to be collected. I think the sustainability is there; I just think that some of the surveys are missing where birds are existing.

The CHAIR: We also had some evidence about the caution we need to take with respect to abnormally large rainfall years compared to periods of extended lower rainfall. Do you have any comments you would like to make about those sorts of seasonal issues in respect to bird numbers?

Brian HILLER: Again, if you read through the literature on Australian waterfowl, and it does not matter where – if you read Frith from the 60s, 70s and all the way up to the 80s, or if you read *Birds of the World* right now, which are the regularly updated species accounts – they are pretty consistent in saying that the waterfowl, in particular in Australia, are basically water based. They are going to go wherever the water happens to be. If you had a lot of water in the channel country and Birdsville got cut off for three weeks, then guess where the birds are going to be. If there is massive flooding in other parts of New South Wales, guess where the birds are going to be. And not all of them – you are not going to necessarily see chestnut teal move up into those areas because that is not part of their core range – you may. But you are going to see that large numbers of grey teal, large numbers of pink-eared and large numbers of black ducks are going to move to those areas where the water is most abundant, and they are going to take advantage of those. In some cases, if the flood lasts long enough, they may breed twice in a given time period.

The CHAIR: Ms Bath.

Melina BATH: Thank you, Chair. You are a professor of wildlife biology. Are you funded by any hunting organisations in Australia?

Brian HILLER: I am not.

Melina BATH: Thank you. You alluded to it just then – I am interested that in your submission you talk about the 'episodic irruptive boom-bust cycle of waterfowl', or in this case we are interested in ducks. Can you just elaborate a little bit on that?

Brian HILLER: Yes. It is sort of similar to what I just mentioned in that when you have large rain events or large flood events across a landscape, that is when the birds are going to take advantage of essentially additional habitat that was not there prior to the rain. When that happens – again, similar to what Dr Kingsford was talking about earlier – flooding events come and the birds go and breed. And they did, and they have done that for millennia. What happens when all those extra birds are produced – and again, if you have chestnut teal or grey teal or black ducks or some others that are double brooding in some cases, they might produce 15, 16 or 18 ducklings that survive to fledging age. Well, that is fine during this boom period, right? But when that water recedes – and again, if you look back through the BOM data on waterfall and rain abundance, you can see where the boom years are and where the bust years are – when the bust comes, you are going to shrink back to your core breeding population. As you were just mentioning, one of the things in terms of a cautionary approach when those busts happen is to be more conservative in your approach to the harvest. You do not want to harvest the core breeding population; you want to harvest the stuff that gets produced above that. That is really where that boom-bust comes in. That boom produces a lot of extra birds that at some point – when the bust comes – are going to die. The question is simply: how, and what is going to be the cause of mortality? The duck does not particularly care if it is by shotgun or by starvation or by bacteria or predation or whatever else. That is not relevant to them. Honestly, from a management standpoint, we try and control the things we can control. One of the few things we have control over is harvest, right? So we try to regulate the harvest as a result. When the bust comes, we regulate the harvest to reduce the harvest of core breeding populations.

Melina BATH: Thank you. In terms of the Heart Morass – you have mentioned the Gippsland Lakes – can you just explain the work that you have done out there and the positive or negative effects the wetland system has had on species numbers that you have identified through your science?

Brian HILLER: The project is not mine per se. Again, I have friends who live down there and they said, 'We're doing this working bee.' I said, 'Okay, fine. What's going on over there?' When they said, 'Well, we have all these duck boxes,' I said, 'Well, cool.' My science nerd kicked in, and I was like, 'Hey, what are you collecting out of that, like what data are you producing?' because being a nerd, I want to know what data are available. They said, 'Well, not much. We just basically clean them out and put new stuff in and then move on to the next one.' I said, 'Wow.'

Melina BATH: The artificial nesting boxes.

Brian HILLER: These are artificial nest boxes that are erected by the Field and Game association at Sale. They have over 500 of them currently scattered around Heart Morass in the Lake Wellington area. So my interest in that was: what is coming out of them from a biology standpoint? What additional birds are being produced if these things were not here? And so I instructed them and sort of gave them some guidance on how they might be able to collect data so that they could have a better understanding of what their work was actually accomplishing and if it was accomplishing anything.

We started the work in 2019, which was sort of the end of the bust period. That bust period, again, you shrink back to your core population, and your core population at that time – we had relatively few boxes being used, but the boxes being used had a 75 per cent success rate. So if a bird nested in the box, 75 per cent of those boxes actually produced at least one duckling. That is considered a successful nest. And in that case, I want to say we had about 730-something ducklings that were produced that year. In each of the past three years where we have had these boom periods we have had a lot of excess birds on the landscape, right. That is the boom. So all those extra birds being produced are now fighting, and I know it sounds crazy to think of a bunch of ducks fighting over duck boxes, but they are actually fighting for opportunities, and the opportunities are limited. So there are best spots to do what they are doing, and there are worst spots to do what they are doing. The best ones get the best spots, and the worst ones get the worst spots.

What we found is that all those extra birds being produced during the boom years are still trying to nest, but they are worse at the job. The core ones are still really good, but the rest of them are not so good. So what we have seen is an increase in total number of ducks being produced. Last year I think the boxes produced between 1200 and 1500 ducklings, but the success rate went down to 49 per cent, because those boom ducklings that are being produced are not competing as well as those core ones that have survived the tough times. So they are probably not huge contributors to the population. Those are not very good at their job.

Melina BATH: Thank you. Would you have any evidence that you could show us on this? Have you got some data?

Brian HILLER: I have preliminary reports that I can certainly share.

Melina BATH: Thank you. With the committee?

Brian HILLER: Certainly.

Melina BATH: In terms of the hunter volunteer hours and the work that they have done there in erecting these boxes, can you make a comment around the efforts in terms of conservation and therefore duck health or duck populations? Is it anecdotal evidence?

Brian HILLER: The effort that goes into this is each year it is a three- to five-day period where we get typically between eight boats with three people apiece, so you are looking at 25 people give or take or as many as 15 boats with three people apiece. It is three 7- or 8-hour days with as many as 50 people going out and doing this work. Again, they are doing this on their own time, their own energy, their own gas. They are not being compensated for the hours they put in. They have to source the straw that they put in. There is an awful lot of time, energy and money been put into it. I do not know that I have an exact dollar amount, but to replace that would be, I would say, several thousand dollars annually.

The CHAIR: Mr Bourman?

Jeff BOURMAN: Thank you, Chair. Dr Hiller, earlier this month at a somewhat parallel inquiry to this in South Australia you were asked a question that I think gets to the nub of the issue from a sustainability point of view. There are two parts. Part one: has any bird species ever been hunted to extinction?

Brian HILLER: Not by regulated hunting, no.

Jeff BOURMAN: And two, what bird species are at risk of being hunted to extinction by regulated recreational hunters in Australia in the 21st century?

Brian HILLER: None that I can think of. Even the things that are relatively rare, again, on the landscape scale – freckled ducks and blue-winged shovelers are not as common; blue-billed ducks are not as common as, say, grey teal or something like that – I do not know, especially given the increase in identification requirements and the changes in how waterfowl hunting actually operates. On waterfowl hunting – Dr Kingsford talked about this earlier – in the 1980s it would not be uncommon to see that threat be more real, where many more non-target species were being shot, again, illegally, whereas now there are many, many fewer. The regulations are quite restrictive, and the requirements are pretty rigorous to get into waterfowl hunting, so I do not really see that as being a threat. Again, it is not going to be a threat. Your biggest problem is habitat. If you are going to have water, you will have much healthier populations, but if you keep losing habitat – 50 per cent of Macquarie Marshes have gone – that is not helpful.

Jeff BOURMAN: Dr Hiller, there was a bird in the States I believe that was hunted to extinction – the passenger pigeon – in the nineteenth century. What is the difference between what happened there with that and what is happening in a regulated environment? How can we be assured that we are not going to go down the same way as the pigeon?

Brian HILLER: The way that waterfowl hunting currently happens in Australia is that you have to go through a firearm safety course of some description, either in South Australia or Victoria you have to go through them; then you have to go through a waterfowl ID test in which you have to identify correctly the game species and non-game species; then there are obviously seasons that are set, limited seasons set outside the breeding season primarily; and you have bag limits. Whereas in the mid-1800s what we saw was an expanding US population from urban centres in the east to western areas. We saw not only expanding population but expanding technology – both firearm technology and railroad technology – which did basically a three-pronged approach. If you wanted to cause the most populous thing on the planet to go extinct, this is pretty much how you would approach it. You would run railroads into places where they were basically safe and breeding in very large numbers, which is exactly what we did. We ran railroad spurs into every large forest in the northern part of the US, and then we cut down all those forests where the birds were breeding and at the same time we were shooting them in unlimited numbers. It was market hunting. It was hunting, technically, but I consider it to be market slaughter. It was unregulated. There were no bag limits. These birds sometimes would pass over a mile wide for three days. There were certain flocks that were counted as having 2 billion individuals. No, we do not see any potential, and there is no correlation with that at all.

Jeff BOURMAN: Thank you, Dr Hiller, one last question. In Victoria we obviously have a very different thing. We have even got state game reserves that were originally purchased using hunters' money. Do you think Victoria is on the right track at the moment – let us see how it goes after the inquiry – with its approach, and are there any ways it could be improved to ensure the sustainability of the breeds?

Brian HILLER: Honestly, the things that I have seen added in Australia recently are things like what Dr Klaassen was talking about in adaptive harvest management. I think that is a movement in the right direction because it does provide you with an ability to be flexible based on environmental conditions. Again, if you have really good years of water, a couple of years after that really good water you are still going to have that lag of boom, in preparation for when that bust happens being ready to pull the reins back. I think, again, one of the biggest challenges you are going to have now and going forward is habitat availability. Increasing urbanisation is a problem. Increasing development is a problem. Even on a trip to Connewarre I was astounded at all of the townhouses, condos and development happening right on the edge of a pretty important Ramsar wetland, and my understanding is that the place immediately adjacent to it is under contract by a developer as well. So development in habitat is going to be a problem. Hunting is not going to be your problem.

Jeff BOURMAN: Thank you. I think I am out of time now.

The CHAIR: You are.

Jeff BOURMAN: I am.

The CHAIR: Mr Galea.

Michael GALEA: Thank you, Chair; thank you, Dr Hiller. In your submission you talked about the economic benefits that duck hunting provides. I understand that you have been watching along, so you may be anticipating this question. In terms of substitutability, we have heard differing accounts of how much that would actually be offset by spending in other areas if, for example, people were no longer to hunt ducks. I wonder what your view on that would be, please.

Brian HILLER: I am not an economist. I am not trained as an economist. I do teach a couple of courses that deal with the human dimensions aspects of wildlife management, and one of the aspects of that is regional economic analysis. It is what happens when people go places, right? When you have a duck season, you have a certain group of people, some of whom probably do have equal passion for other outdoor activities, be it camping, four-wheel driving, deer hunting, whatever else they might do – fishing. But some of them are really into and very passionate about collecting ducks for food. That is a primary driver for a lot of those folks, and that is pretty important to them. So if they lose the ability to harvest ducks, they may switch to other hunting, but they are not going to go to wetlands. They are obviously not going to go to those same places. Instead of going to Heart Morass, for instance, and buying a \$70 key, buying gas in Sale, staying at the hotel or whatever, they are going to go farther up the Briagolong Road and they are going to go up into the High Country. They may stop for gas, but they are going to drive through that. They are going to camp out of town, or they are going to be elsewhere. I do not know that it is going to be as straightforward as they are just going to simply switch their interests. They may, but I do not know that it is going to be a one-for-one switch.

Michael GALEA: Thank you, Dr Hiller. You have also stated that a lot of the research into waterfowls in Australia is conducted due to the presence of duck hunting. We heard from Dr Klaassen this morning, who is one of the researchers and also one of the developers of the interim harvest model, that his work would continue anyway with respect to avian flu monitoring and other such things. How do you respond to that?

Brian HILLER: I think he will probably continue disease monitoring. You are still going to have some concern for wildlife populations and wildlife disease, because we have certainly seen that here and here in Minnesota specifically, where avian flu has jumped from wild birds into domestic turkey flocks. So you are going to see certainly monitoring, and good wildlife management and transparent wildlife management would include that. But I do not know that you are going to see the same level of monitoring of waterfowl populations that you currently see, and that certainly needs to be expanded even as it is.

Michael GALEA: We have talked a lot about broad trends and those trends going only one way, and I know some colleagues have referenced the sort of breaking correlation between rainfall and duck populations. How do you see the solution to that, and how does hunting actually help that and not hinder it?

Brian HILLER: Again, I think this is one of the important aspects of the way that hunters operate and how they think, and we see this here in the US. Groups like Field and Game, here an equivalent would be something like Ducks Unlimited or Delta Waterfowl, where their vested interest is in ensuring a future of healthy wetlands. Again, there is certainly an incentive for that, and that incentive is that they are putting seed in the ground with the idea that eventually they might have the opportunity to go and harvest some of the produce. If you lose that and if you lose hunting, you are going to lose a significant portion of the people who right now have a vested interest in ensuring wetland health. They go and they clean up wetlands. They buy them, like they did Heart Morass, Connewarre or take your pick of other places – Tolderol. I mean, you are talking about millions of dollars that have been spent in purchasing and restoring wetlands where if there is no vested interest, that money is not going to be spent in that same way.

Michael GALEA: Would it also be fair to say, though, that a number of conservation groups who do similar things with regard to natural habitats and wetlands would perhaps have a greater ability to do that if these wetlands were not being used for shooting?

Brian HILLER: I do not know that you are going to see it on the same scale. I mean, certainly, I worked for WetlandCare Australia when I lived there, what, 22 years ago or 23 years ago. I worked for them and saw sort of how on-the-ground stuff worked with a 'non-hunting organisation', but WetlandCare Australia actually started in the Riverland as Ducks Unlimited Australia.

Michael GALEA: Thank you, Dr Hiller. With an eye on the time, I will just ask one quick last question. Ms Bath asked you if you receive funding from any duck-hunting organisations in Australia. Do you receive funding from any pro-duck-hunting or similar groups outside of Australia?

Brian HILLER: I do not receive any funding from any organisations that are associated with hunting.

Michael GALEA: Thank you.

Brian HILLER: My travel to Australia was funded by me and by my university. All of my travel was funded by my university.

Michael GALEA: And that includes grants to your university research?

Brian HILLER: I mean, I only work with the Department of Natural Resources. That is, my grad students have been funded by them, but I do not receive any funding from hunting organisations, no.

Michael GALEA: Thank you. Thanks, Chair.

The CHAIR: Mrs McArthur.

Bev McARTHUR: Thank you very much, Chair. Great to see you again, Dr Hiller, and thank you so much for all the work you do in ensuring that bird populations are enhanced around the world. And can I just ask: you mentioned that we should remove the political influence from the data analysis process. Would you like to expand on that?

Brian HILLER: One of the human dimensions aspects of wildlife management is obviously the human part, right? And there is always going to be political input, because that is just the nature of humans and that is just how our system works, but I think one of the important aspects of science-based management is allowing the science to drive the management. And that does not always happen. We have certainly seen examples here in Minnesota where, you know, the grey wolf came off the endangered species list, and the Minnesota DNR had a really good plan. They had a five-year moratorium on recreational harvest, because that was what they were supposed to do, that was what their plan said. But the legislature got involved, and they made a new rule that demanded the Department of Natural Resources have a wolf season immediately. That is political interference, for my money, and it does not make scientists very happy and managers very happy when they have to deal with that, because we try, again, to be conservative in protecting the resource and making sure that there is long-term sustainability. That is why we develop management plans, and that is why we adhere to the science.

Bev McARTHUR: Thank you. We heard from professors Klaassen and Kingsford that habitat loss is a key driver in reducing numbers of bird populations. So with that in mind, have you seen in Australia or elsewhere in the world evidence of consequential increases in bird populations where hunting is banned?

Brian HILLER: Again, most regulated hunting has a very minimal impact, and even both professors Kingsford and Klaassen agreed that it was minimal at most in Australia. Here in the US our populations are hunted, but again we see declines in other populations. In fact in the most recent bird population assessment here in North America the only populations that are actually increasing are those that are basically waterfowl that are hunted. Everything else is in decline.

Bev McARTHUR: Right. Now, we see on the ground the evidence of volunteerism in preserving and expanding our wetlands areas. Have you ever seen any evidence of activists opposed to bird hunting working voluntarily to maintain and expand wetlands areas?

Brian HILLER: I have not seen anybody coming out with us, but again I do not know that they would necessarily highlight that aspect of their personal life. Again, I do not know. You could ask New South Wales. Boy, that would be a really good research question to look at in New South Wales and see if post duck-hunting

bans there was a shift in whether or not people actually went and did the things that they said they were going to do. There are a lot of complaints that I hear from bird groups in particular and other groups that say, 'Oh, if you ban duck hunting, then we'll come and help.' Well, duck hunting is banned in New South Wales. Who is speaking up for wetlands there?

Bev McARTHUR: Quite.

Brian HILLER: It would be a great research question. I would love to know.

Bev McARTHUR: Well, perhaps you could do it. You have highlighted the substantial literature worldwide that supports regulated game hunting of native birds as a largely sustainable activity. Could you expand on that?

Brian HILLER: Again, regulated hunting is typically fairly tightly regulated. Some of the stuff you have talked about and even some of your guests have talked about earlier, where the average duck hunter in Australia goes four times and probably shoots maybe 10 ducks as an average bag – I mean, that is not a populational impact. There is no evidence that suggests that that is a populational impact or is driving anything even close to bird numbers being in decline. It is habitat that is really the key, as Dr Kingsford said repeatedly. Habitat is key. If you have habitat, you have birds.

It is sustainable here in the US, but we do it a little differently. We do it based on individual species, which is another thing that does not happen, which Dr Klaassen actually mentioned. You know, there is a bag limit of, say, four ducks, but there is no 'You can shoot X number of ducks of this species and X number of ducks of this species out of that four.' Whereas here in North America, with some of our less common species – say, the northern pintail, which are at greater risk of overharvest – some years they are not allowed to be shot at all and other years you are allowed one bird per day per hunter over the course of the season. There are other species where you can only shoot them during this time period because it is during their migration or they are leaving them safe during the migration. So it is a little bit different, but hunting is not a risk to those populations.

Bev McARTHUR: We have heard that if hunters get banned from duck hunting, they will move into another area of hunting which people seem to think is okay – pigs, deer, fish. Do you have any evidence of that? Also would it not be the case that if hunting is banned in one state here, they might go elsewhere where it is not banned or even overseas to New Zealand, for example? Is there any evidence that hunters will pick up the slack in some other area just because they like shooting?

Brian HILLER: Duck hunting is very different. It is very gear intensive, and it is sort of specialist. They probably participate in other hunting as well. They probably do pest management. They probably shoot foxes and cats and hares and other stuff like that. But there is something about duck hunting that sort of makes people want to do it. I have had somebody relate it basically to standing in a cold shower and tearing up \$20 bills for an hour. Whereas if you are going out deer shooting that is not quite the same. You may supplement your food with deer, but I do not know that you are going to see the pursuit in the same way. I do think that if it is banned in Victoria and they do not ban it in South Australia, you are going to see a lot of Victorians go to South Australia for sure.

Bev McARTHUR: So there will be an economic impact?

The CHAIR: Mrs McArthur, your time has expired. Thank you. Ms Purcell.

Georgie PURCELL: Thank you, Chair. Thanks, Dr Hiller. You are here today as someone that is considered an expert, I guess, in the space of ecology. Are you a duck hunter also?

Brian HILLER: Yes, I am.

Georgie PURCELL: Thank you. You have received a number of questions about payment from lobby groups, and I just wanted to talk about that as well. In early 2023 Field and Game established a fighting fund to secure experts in the select committee process that we are facing here as well as legal advice. In your responses to committee members before you said you were not paid by any shooting lobby groups. However, recently when questioned over the use of these funds, a representative from Geelong Field and Game said:

[QUOTE AWAITING VERIFICATION]

What I can say is we have had renowned duck expert Dr Brian Hiller out from America to present to the select committee on opening morning, and he is also presenting in South Australia to their committee.

So I wanted to ask again: have you been paid in any capacity at all, including for travel, and if not, can you please explain those comments to the committee?

Brian HILLER: No, I have not been paid. I happened to be there anyway for a research project reconnection. I have not been paid for any travel at all.

Georgie PURCELL: No problem. Thank you for your answers. I guess it is a question for Field and Game when they appear. If duck shooting –

Brian HILLER: Just because I happened to be there at the same time, they asked me to present based on my expertise.

Georgie PURCELL: You were referencing in relation to questions about the fighting fund and members asking where that money went, so that is why I asked that question.

Brian HILLER: Well, it has not gone to me.

Georgie PURCELL: If duck shooting supposedly does not affect populations, why do harvest numbers impact abundance?

Brian HILLER: Harvest numbers generally do not impact abundance. They might impact distribution on the landscape scale, but as a general rule, the harvest that is taking place is typically referred to as 'compensatory'. Those are excess birds produced in a given year that will likely die in some other capacity.

Georgie PURCELL: Okay. You have mentioned Heart Morass as a success story of conservation a number of times in your evidence. I just wanted to highlight that in 2009 it was revealed that Field and Game was illegally diverting water from the Latrobe River into Heart Morass to their private shooting property just a week prior to the opening of the 2009 duck shooting season. Southern Rural Water laid charges, and a Field and Game Gippsland wetland manager pleaded guilty to illegal diversion of water in the Sale Magistrates Court. Can you tell me how stealing water during a severe drought so that a small number of Victorians can participate in a recreational pursuit can be considered conservation?

Brian HILLER: Did you say 2009?

Georgie PURCELL: Yes.

Brian HILLER: 2009 – I have no concept of what Field and Game was in 2009.

Georgie PURCELL: My questions are in relation to you referencing that wetland a number of times as a conservation success story. I am asking if you believe that these actions are in line with conservation efforts – stealing water during a drought?

Brian HILLER: What, was he prosecuted for it?

Georgie PURCELL: Yes. He pleaded guilty.

Brian HILLER: Okay. Well, then he was prosecuted for it.

Georgie PURCELL: That is not my question. My question is: do you believe that this is in line with conservation efforts?

Brian HILLER: Not necessarily, no. Again, if he was doing something illegal, then it was not the right thing to do and he was prosecuted for it.

Georgie PURCELL: Okay. Thank you for that. Earlier you said that ducks do not care how they die. I would disagree with this statement, and we know that many groups, including the Game Management Authority themselves, have concerns about wounding. Do you have concerns yourself about wounding and the suffering that this causes to ducks if they are not retrieved, which we know in many cases they are not?

Brian HILLER: I think 'many cases' is a stretch, for one. As a general rule, the ducks are fighting every single day. Everything out there is just trying to get to tomorrow. They are trying to avoid predation, they are trying to avoid disease, they are trying to avoid injury – they are trying to avoid everything. That is what they are doing.

Georgie PURCELL: So that sounds to me like ducks are under threat from a range of other factors. Why would we add another threat into the equation?

Brian HILLER: It is mortality. Mortality is mortality. It is part of total mortality – so again, as long as you are not adding to additional causes of mortality. Mortality is mortality.

Georgie PURCELL: Isn't shooting an animal to kill them an additional cause of mortality?

Brian HILLER: That is not additional mortality, no. It is compensatory.

Georgie PURCELL: Okay. Before you said that waterfowl identification tests are a safeguard. Do you think it is concerning that the Game Management Authority's own data shows that 80 per cent of shooters cannot tell the difference between game and protected species?

Brian HILLER: Are those people allowed to then go shoot?

Georgie PURCELL: Yes. These are licensed hunters who –

Brian HILLER: Have these people passed the waterfowl ID test, yes or no?

Georgie PURCELL: These are licensed hunters who were surveyed as part of the shooter knowledge test, yes. They were shooters that are licensed with the WIT – that have passed.

Brian HILLER: So they passed the waterfowl ID test.

Georgie PURCELL: Yes, that is correct.

Brian HILLER: And they are allowed legally to go hunting.

Georgie PURCELL: Yes.

Brian HILLER: If, for instance, you have a drivers licence and you are legally allowed to drive and you drive over the speed limit, even though the sign is right there, what is your response to that? Do we prosecute them, or do we take their drivers licence away forever?

Georgie PURCELL: My question is: do you think it is concerning that 80 per cent of licensed hunters surveyed could not tell the difference between a game and protected species?

Brian HILLER: They had to pass their WIT, did they not?

Georgie PURCELL: They did, yes. They passed their waterfowl identification test and became licensed, and then they failed a hunter knowledge test. My question is: is that concerning to you?

Brian HILLER: If they are not able to continue to do so, then they should have a refresher course, certainly.

Georgie PURCELL: Okay. Thank you.

The CHAIR: All right. Ms Watt.

Sheena WATT: Dr Hiller, hello.

Brian HILLER: How are you?

Sheena WATT: Thanks for joining us again. I have just a couple of questions for you today. Some of the research that we have been presented with from others has shown the majority of Victorians oppose native bird hunting. My question to you is: do you believe that there is sufficient societal goodwill for hunting to continue in its current form?

Brian HILLER: I think I would want to know what the survey methods were like to see whether or not that was representative of the actual population. And again, I would want to know what the distribution of that survey was in terms of their concentration in urban versus rural areas, because you have a very urbanised state –

Sheena WATT: Yes, that is true.

Brian HILLER: with a lot of folks who live in the greater Melbourne area, compared to those people who live in regional areas and rural areas, so I would want to know more about how those surveys were conducted as to an 80 per cent or 60 per cent of people who think duck hunting should not happen.

Sheena WATT: I asked earlier about an Australian-specific study. Do you have any knowledge of any studies that have taken place about societal attitudes to hunting over a longer period of time, perhaps in the US or where you might be more familiar with that? I am seeking to understand the societal attitudes towards duck hunting and how they have changed over time. Given limited evidence here in Australia, I wonder if there is anything that you can point me to from the US, given your place there.

Brian HILLER: We have had an ongoing human dimensions survey of fishing, hunting and wildlife-related activities since 1955. It started out as basically fishing and hunting, but wildlife viewing has certainly increased in popularity, and they felt that it was important to include those folks. And, again, there is a lot of crossover. Much like we have talked about before, there is a lot of crossover among user groups.

Sheena WATT: What do you mean by ‘wildlife viewing’, sorry? Is it watching for examples. What are we talking about?

Brian HILLER: Wildlife-related activity. It could be things like canoeing or kayaking to go birdwatching or feeding birds and stuff like that.

Sheena WATT: Okay. Thank you for that. We have heard evidence as well earlier today that there are two wetlands here in Australia that support more than 120,000 waterbirds – and that really does represent about 65 per cent of the total abundance here – and that these wetlands are not actually in our state, interestingly. What experience do you have of these interstate-based wetlands and their contributions to breeding and numbers? Then I have got a sort of follow-up question on that. Are you familiar with them and their –

Brian HILLER: I am familiar with their location, generally. Again, I think one of the important parts – and some of your previous guests have certainly mentioned this – is that when you look at what should be considered the population, so to speak, it should essentially be in a line from Port Augusta, South Australia, to someplace north of Brisbane, because everything within that sort of larger system would potentially show up in a Victorian duck-shooting swamp, for instance. So they are all part of the same group, and that is important to recognise. That is a very large geographic area. These are highly nomadic species that move great distances fairly rapidly in search of water when water is scarce.

Sheena WATT: Yes, but we also know that in some of those states, hunting is not practised, particularly looking to Queensland and New South Wales.

Brian HILLER: Correct. Those would be considered essentially source populations.

Sheena WATT: Yes.

Brian HILLER: So that is part of the source of that entire – I do not know, it is probably not even a quarter of Australia; it is some place in that order of between a quarter and a third. That is all part of what contributes. When you talk about Victorians shooting ducks in Victoria, all of the birds that are in New South Wales and Queensland are not being affected.

Sheena WATT: Yes. Do you have any knowledge about any hunter-led wetland conservation efforts that are taken in these states? Are hunters from all over travelling to these source wetlands to do conservation efforts so that they can shoot them in the states where that is available to be done? Do you have any knowledge of that? You talked about hunter-led conservations.

Brian HILLER: Not specific knowledge of that.

Sheena WATT: No, okay. That is all right. Is there more time or is that time?

The CHAIR: You have a little bit more time if you would like.

Sheena WATT: One more moment. I wondered if you had any reflections about – no, I think I might put it in writing actually and send that to you. I have got to frame that up a bit better before I put that to the committee. Thanks.

The CHAIR: Certainly. Ms Copsey.

Katherine COPSEY: Thank you. Thanks, Dr Hiller. You speak about boom and bust and you speak about core populations and extra ducks, but you acknowledge, though, the long-term decline in observed populations over time, don't you?

Brian HILLER: The eastern Australian waterbird survey certainly does.

Katherine COPSEY: Thank you. You also talk about ducks potentially becoming an agricultural pest if duck hunting is banned. I understand how rabbits can impact on the agriculture here in Victoria, but can you explain how ducks would in Victoria, where we do not have a significant rice-farming industry?

Brian HILLER: Certainly. You have several species that actively feed in fields, including mountain ducks and black ducks as well as wood ducks, and they have the potential to actively contribute to farming losses.

Katherine COPSEY: You spoke in your submission about farmers regarding ducks as a nuisance, though.

Brian HILLER: Yes. If you just planted your field full of organic wheat or whatever it is you are planting and a few thousand ducks show up and eat all of the new seedlings, I can assure you they are going to consider them a pest.

Katherine COPSEY: So you are not speaking about farmers simply deciding that duck populations would be a nuisance? That is not the intent of your submission? I just wanted to clarify that.

Brian HILLER: No. But if the potential exists for them to then grow to a population, again, in boom years they could be considered a nuisance. I know at least one farmer in South Australia who has a duck-mitigation permit specifically because ducks feed on the grain that he puts down for his cattle.

Katherine COPSEY: Thank you. You also speak about how if ducks were agricultural pests they would be shot without proper regard to permits, species type and whether or not it is breeding season. Do you believe that we need to better regulate on-farm pest management in Victoria?

Brian HILLER: I do not think you at that point yet, but I can assure you that when you look at what happens in New South Wales, there are species that you are very concerned about that do get shot. Blue-winged shovellers definitely get shot.

Katherine COPSEY: In the future, then, do you consider, if that scenario played out, that Victoria should better regulate on-farm pest management?

Brian HILLER: I am not a farm management expert.

Katherine COPSEY: Thank you. In your submission you talk about the wounding of ducks that occurs and the efforts of volunteer duck rescuers to recover and provide veterinary attention. I just wanted to confirm my understanding of what you say there: you blame animal rescuers for the harm inflicted on those ducks, not the people who have shot the bird with a gun?

Brian HILLER: No, that is not what I did.

Katherine COPSEY: Your submission reads:

Allowing "rescuers" to continue to engage in this process goes directly counter to the hunter's code of ethics and the ongoing efforts to reduce wounding by hunters.

Brian HILLER: Correct.

Katherine COPSEY: So how do you square that? How do you blame rescuers for the harm done then?

Brian HILLER: When a hunter shoots a duck, the intent is to bring it to bag and bring it home and put it on the table and eat it. That is the intent. When that duck is then taken, regardless of whether or not it is dead or half-alive or whatever, their intent is still to make that duck die as quickly as possible, as humanely as possible and as cleanly as possible. That is their intent. When someone goes out and takes that duck that they are trying to pursue and bring to bag, that duck no longer gets counted in their bag, for one, so they are now allowed to shoot another one. So rather than just having the first four birds and taking their ducks and going home, now you have the potential if someone, say, steals their four ducks that they have a shot and have not been able to get out quick enough to get, now that person could shoot eight birds.

Katherine COPSEY: In fact hunters are supposed to not take another shot until they have recovered the bird that they downed previously, but thank you for going through that example. No further questions from me.

Brian HILLER: No. That is specifically the point, which is that if for instance a hunter shoots a duck and they are trying to pursue that duck to be brought to bag and someone in a kayak comes along and grabs that duck, well, they are no longer allowed to pursue that person. So as a result, from a management standpoint, you are now not allowed to count that in your bag because you have not brought it to bag, but at the same time you now have a four-bird bag limit still. And if that happens three more times, you now could have shot possibly as many as eight birds because four of them were taken by somebody else. So now instead of just shooting the four and going home, now they have shot eight.

The CHAIR: Okay. Thanks, Dr Hiller.

Brian HILLER: And from an enforcement standpoint, which we also think about here in the US quite a bit, enforcement matters. So enforcing that requirement to bring the duck to bag as quickly as possible and dispatch it humanely is something that is important. So when they go out and try and pursue that and meet that code of ethics that they are required to – and in Australia it is actually law; it is not a law here in the same way, but they are required to make a concerted effort to do so – that is an enforcement issue, and now you are possibly taking more birds in your bag limit than would have been allowed.

Katherine COPSEY: Thank you.

Brian HILLER: So you are changing the management. If you assume that every person shoots choose four when in fact they are actually shooting eight, that changes management and changes your numbers.

The CHAIR: Dr Hiller, Mr Mulholland, who is a member of the committee from Northern Metropolitan, has joined in the course of the proceedings, so I will ask him if he wishes to ask any questions.

Evan MULHOLLAND: Yes. Thanks for your submission. I really appreciate it. I just had a quick question following on from the conversation we were having, which was quite insightful. I am interested to know about the process when a bird is shot and it is actually taken by someone else, as you were saying it might be a kayak or someone else. Do you know how often this happens? Is it a regular occurrence during hunting season?

Brian HILLER: I do not know how often it happens in Australia. It does not happen here in the US. I saw the Connewarre folks that were there, the duck rescuers that were at Connewarre, but I did not see any ducks wounded that were retrieved by other people. But again, it is certainly possible.

Evan MULHOLLAND: But is it something that has happened in the past?

Brian HILLER: Presumably that has happened in the past. Yes.

Evan MULHOLLAND: So under the existing framework of the law, that is allowed to happen or can happen?

Brian HILLER: That is my understanding of how your system operates: you allow people to go out and take those ducks. In the US that would actually be considered hunter harassment and you would be arrested and fined for that.

Evan MULHOLLAND: So it would be hunter harassment in the US if someone were to come and take a duck that you have shot?

Brian HILLER: If you were kayaking around and deliberately disrupting a person's hunt, that would be considered hunter harassment, and I would expect that you would have charges filed against you, yes.

Evan MULHOLLAND: So presumably, would you recommend changes to existing law here to better align with what you are saying?

Brian HILLER: Again, that is a sort of individual state – and even here in the US it is an individual state statute. That would be up to your state Parliament presumably to decide whether or not that was something they wanted to pursue.

Evan MULHOLLAND: No worries. That is very interesting. That is all I had, Chair. Thank you.

The CHAIR: Thank you, Mr Mulholland. Dr Hiller, that is the end of our questions for you in our allocated time. I would like to thank you very much. It was good to see you again, and thanks for your contribution.

Brian HILLER: It was good to see you all.

The CHAIR: You will soon receive a copy of the transcript of today's proceedings to review before we publish it on our website. So thank you again. We will take a short break as we get set up for the next witness.

Witness withdrew.