



ORAL HISTORY COLLECTIONS

INTERVIEWEE: Richard Major

INTERVIEWER: Jo Kijas

PLACE: Australian Museum

DATE: 30 April 2012

TRANSCRIPT

0.00 **JK:** This is an interview with Richard Major and Jo Kijas on the 30th of April at the Australian Museum for the Shared Terrain Oral History Project on behalf of the City of Sydney History Unit.

And, Richard, can I have your full name and year of birth?

RM: O.K. Richard Major ***** 1961.

JK: Thank you. So can we start with some personal background, where you came from and what are some of your influences that have brought you into this role? And let's start there, to get a bit of a context about you.

RM: All right. Well, I was born and raised in Sydney in Wahroonga and from a very early age I was interested in fish particularly. I was influenced by Jacques Cousteau on the television and right from primary school I wanted to be a marine biologist was my goal. And actually I think I was very fortunate to have some goal like that because I found it very easy going to school and going to university,

knowing exactly what I want to do with my life. At the end of first year university when I was going to go off to Heron Island, diving, I went to get my medical certificate and the doctor wouldn't give me one because of my asthma and at the time, I suppose – I mean, nowadays I guess I'd go to another doctor but at the time actually the son of one of my father's colleagues had an asthma attack and died under water the same week that I had that, so it was one of those things I sort of took seriously and thought "Oh, well, I'm not going to study fish if I can't spend time under the water so I'll look for something else" and I switched over to birds. So I'm not one of those people born with binoculars embedded in my skull. I sort of switched to birds at the end of first year of university – actually, probably a bit later. I sort of scouted around and looked for things and by the time I was starting honours I was quite keen in birds.

2.06 I still did my honours partially in fish and partly on plants but at the end of that I decided I really wanted to do a project on the ecology of a single species of bird and I left Sydney and went to Monash University and I did a PhD on the ecology of the White-fronted Chat.

JK: Hence the article on the White-fronted Chat. Why birds, though? What happened there in your choices?

RM: I think it's probably that the plants and animals you grow up with, I think, are quite influential. I lived right on the edge of the bush and after school I'd go and play in the bush and so I would see things there and I became very interested in the flora of Sydney too in the sandstone vegetation. A bird that really struck me at that stage was the Pied Currawong, which at that stage I thought was fantastic because it would come 'round and peck on the milk bottles and get the cream out of the milk bottles. We had big flocks of currawongs coming through the suburbs and feeding on cotoneasters and things and dumping on our deck and actually I was quite keen, I wanted to do a PhD on currawongs while I was at Sydney Uni. So I was still doing my undergraduate but I was sort of strongly advised against a bird project for an honours thesis at the time. So, anyway, I guess I was quite influenced by early television documentaries. I mentioned Jacques Cousteau before but also things like Wild Kingdom and I liked furry mammals and birds and big things like that. I think I was attracted to these flamboyant vertebrates and I hadn't really considered invertebrates much at that stage.

4.11 **JK: And so you went to Sydney?**

RM: Yes, I went to Sydney Uni for my undergraduate degree and I did honours at Sydney Uni and then I went down to Monash University in Melbourne and did my PhD down there and then after my PhD I came back up to Sydney too.

JK: And so what is your work background then? Tell me a bit about that.

RM: Well, at the end of my PhD I did a consultancy on Norfolk Island where I worked on the Norfolk Island Scarlet Robin, which is a threatened species nationally. So I did a little bit of work on that, I did a little bit of work at Sydney University in their first year biology department and then I got a post doc [post-doctoral] position at the Australian Museum and I spent a few years on that and then I got a permanent position and so really I haven't worked very much else. So I've been at the Australian Museum now for twenty two years.

JK: And what's the title of your position?

RM: Well, the title of my position is Senior Research Scientist. I was employed as a terrestrial ecologist but as departments change with time I'm now in an amalgamated department with terrestrial vertebrates. So I guess I'm now a sort of bird researcher whereas my formative position here was as an ecologist where I studied things a bit more broadly than birds, so I have done some projects on insects and spiders as well but primarily I've worked on birds ever since my PhD.

6.02 **JK: So tell me about the sorts of projects that you've been doing and then if I've got it right we move into more urban birds. So give me some of that history.**

RM: O.K. So I guess I'm really interested in population ecology, so I like studying the ecology of single species and I guess I'm very privileged to do so, to sort of get into the private life of a bird. I started off with my White-fronted Chats, I've worked on the Scarlet Robins, New Holland Honeyeaters, Red-capped Robins, a bunch of different species where I'd sort of look at all sorts of things about them, their breeding biology, their feeding biology, trying to look at their habitat use, how long they live, that sort of stuff. In particular, I've been looking at the effects of human activities on animals and particularly birds and so some of the big processes that I've looked at have been habitat fragmentation and urbanisation is one of the forms of land clearance that leads to fragmentation. So I guess I've had two big research projects since I've been at the Museum, sort of two main drives. One was looking at habitat fragmentation and then the other

is urbanisation. The fragmentation work I did out in the wheat belt of New South Wales, so that was looking at the distribution of birds in small patches of woodland that remain after they've been cleared for agriculture, so looking at the birds inhabiting small patches of woodland, largely in the wheat belts that are surrounded by sheep and wheat production country. And there I also studied – well, Red-capped Robins in particular is a small bird which was typical of those that are declining so I looked at the population ecology of those, did some work on spiders and insects as well to see if they were affected in the same way as birds, and then the last nearly ten years I've switched to the urbanisation as a process and looked at the ecology of birds in urban environments.

8.25 And I've done that particularly in collaboration with Birds Australia and the Birds in Backyards project and a number of students from various universities around Sydney.

JK: And so the Birds in Backyards project, is that actually an Australian Museum project or did that come out of the Birds Australia?

RM: Yes, it's had some history to it. It started as a Birds Australia Sydney group project and I was on the steering committee for that. Then there was a sort of time when the Museum could put a bit more work into that and we formed a partnership between the Australian Museum and Birds Australia and that's when we sort of got the website going first of all and our first surveys and so together we got the project sort of really running as a very active project and that partnership lasted a few years and then the Museum has sort of pulled back from the sort of bigger involvement it had in. So it's now just managed by Birds Australia, so it's reverted back to Birds Australia and I'm back on the steering committee still, so it's sort of come 'round full circle. So there was a time there when the Australian Museum was a partner in the project but it started as a Birds Australia project and it's now still going as a Birds Australia project.

JK: Tell me about that project and what sorts of results and findings that you've had, especially as it relates to Sydney. And obviously I realise that you can't fix it around LGA [local government area] boundaries but where we can see what we find about the LGA.

10.14 RM: O.K. Well, the sort of motivation for that project was an educational one that we felt that there are some very serious environmental

issues happening in Australia, that generally there isn't a high level of public interest or understanding in and the people on the Birds in Backyards projects thought well, the way to get people interested in big environmental issues is to introduce them to things that they're already familiar with and build from that and so they thought, well, the animals that they sort of share their day to day lives with are the best place to start and there are a number of issues that we can sort of illustrate through what's happening in people's gardens that apply at a bigger scale. So some of the things that we've looked at are habitat loss, so the effect of clearing, and then again that fragmentation, that the native animals tend to be left in small patches of habitat, little streamside corridors or little remnants of land or the national parks on the edges of cities and so we're able to talk about that issue of fragmentation. So I've had a number of students working on particular projects. So they've documented things like the difference in species occupying large patches of bush on the edge of Sydney, with smaller remnants within Sydney and again with the birds that are able to actually cope in people's backyards as well, so it's an urban project.

12.04

And we've tried to collect data on what people's gardens are like, so the structure of people's gardens in terms of what percentage of the garden is made up of trees or shrubs or grass or pavers and hard surfaces, how many trees they have in their garden, whether they have native and exotic plants and we've tried to relate the birds that are present in gardens with the habitat within people's gardens. Generally, it's quite a hard thing to do and there really aren't a lot of native birds that you find in gardens that are sort of closer to the city. So if you look at the birds that we find in people's gardens there's two types: there's those that really like to live in the native habitat nearby but can make incursions into the built environment and they can get some of their resources within them and then there are some other species that have welcomed this new habitat and are thriving in the new habitat provided by suburbia. So I think some of the things that would be most striking for this – and if we take a historical perspective too – say the Pied Currawong, which was a bird that I was very interested in even at university in my undergrad year, used not to be found breeding in Sydney at all. It would seem to come down from the Blue Mountains where it bred and then during the autumn and winter it would make use of people's gardens, particularly the introduced berry producing plants. So we have certain things we provide in gardens which provide good food resources and so currawongs or something, a big bird that could move around, nest where it traditionally did in the mountains and exploit these extra food options.

14.11 And so we used to get large flocks of currawongs. Since then, over the last probably forty years currawongs are now breeding and they're the most commonly recorded. We did a breeding survey as part of Birds in Backyards and I think the currawong was the second most commonly recorded bird breeding in Sydney, so we've seen changes, so some species have learnt to exploit new options in suburbia. So we still provide currawongs with nesting habitat in terms of tall trees and big food resources in terms of berries.

JK: And so when you were talking about as a young person seeing those flocks, they were just passing through were they, or were they already starting to change their behaviour?

RM: That stage, so that would have been, the time I was interested would have been early 1970s and I don't think we had breeding – I can't be exactly sure of it but I think the breeding records of currawongs, about 1975 we first started to get breeding records and not very many of them. It's been the last twenty years, probably, that the numbers of breeding birds have really increased so that currawongs are staying here year-round and I think that's partially a catch-up time: it takes time for populations to grow and learn. The other interesting side of the currawong story is that we now get more Channel-billed Cuckoos which is a nest parasite. So they're a cuckoo that lay their eggs in the nests of currawongs particularly and then the currawongs bring up the Channel-billed Cuckoo babies. We've got a specific Channel-billed Cuckoo survey on the Birds in Backyards website and that's sort of documenting changes in Channel-billed numbers over time.

16.10 So they've now tracked the currawongs. When currawongs weren't breeding in Sydney, we didn't really get Channel-billed Cuckoos. Now, Channel-billed Cuckoos are something that is very widely noticed by urban residents right through into Hyde Park. At the time of year when Channel-billed Cuckoos come through there's Channel-billed Cuckoos at Hyde Park and Belmore Park next to Central Railway Station, probably 'round the university, I'm not sure, but they're something that comes right through the city, tracking changes in currawongs.

JK: And people notice the Channel-billed Cuckoo because of their call?

RM: Yes. So they have a very loud, quite raucous call which they'll make when flying over to or sitting in trees and it's interesting that the koel is another cuckoo which is also becoming more common in urban

areas, which also makes a very loud call. So they're two species which are very well known by people, not for the best of reasons, during the breeding season each year, which is partially why we chose them for surveys in the Birds in Backyards website; we're sort of working from things that people were interested in. And we've had very good Channel-billed and koel survey records, not only just tracking when the first ones arrive but people recording behaviour and mating behaviour and foraging and all sorts of stuff.

JK: And so what are the reasons why the numbers have increased? Is it just because the currawong numbers have increased?

18.03 RM: Well, in the case of the Channel-billed Cuckoo, I suspect the numbers via them more around Sydney and in the urban areas because of the currawongs. I don't know what their situation is Australia-wide as to whether they're increasing or not but it's something that is definitely more noticeable in Sydney that it would happen. I mean, it has to be correlated with the increase in currawongs breeding because they just wouldn't be here if there weren't currawongs for them to nest in. It's probably a similar story with the koel as well, in that they parasitise the nests of other birds that do quite well in Sydney, so they parasitise nests of wattlebirds and also Magpie-larks. So wattlebirds, they're large honeyeaters. We've got two species of the Little Wattlebird and the Red Wattlebird in Sydney. They're a very well-known component of many people's gardens, they're a very strongly nectivorous honeyeater. I mean, honeyeaters you would think by name should feed on nectar but lots of them spend a lot of their time eating insects and even fruit, some of them. The wattlebirds are really strongly nectar dependent and I think they have benefited from the sort of things we plant in gardens. You know, gardeners like floral displays, so they like things that produce flower. We also like protracted flowering seasons, we like to have things flowering for as long as possible. So what seems to have happened with the wattlebirds is that we have this year-round copious nectar source and that tends to favour larger honeyeaters and more nectar dependent ones.

20.02 So honeyeaters are interesting birds. They tend to track nectar, so they'll track eucalypt flowering, for instance, but the ones that do that tend to be the smaller ones, whereas the larger and more aggressive ones seem to do better, well, seem to dominate more continuous nectar sources. So I think urban areas are quite good at providing continuous nectar sources and so we see the wattlebirds doing well and again the koels parasitise their nests and so we're seeing more of them than we used to as well.

JK: And so what are the reasons that the currawongs have also done so well?

RM: I think the main one is the berry producing plants which first were used as ornamentals but also which have now escaped into bushland, so the currawongs eat the fruits and deposit the seeds and if they're tracking between people's gardens and bushland remnants they're depositing seeds in the bushland, so we now have a lot of weeds. A lot of the typical weeds, like privets and lantanas and blackberries and camphor laurels, ochnas, there's a whole range of berry producing plants that are fantastic food for currawongs and we provided them initially but now they've spread as weeds, so think there's that large food resource that used not to be here.

JK: So am I understanding it correctly, that we humans in the way that gardens have developed and perhaps other plantings in public spaces and things have actually been the reason for why some types of birds have come into the city when they weren't here before?

21.16 RM: Yes. Well, they might have been here before but now sort of dominate. You'll now find wattlebirds in some suburbs of Sydney in greater abundance than they would be in their nearby native habitats, which implies there's a larger amount of resource for them. The classic one and probably the most important bird in Sydney for determining what other birds live here is the Noisy Miner. That's another native honeyeater. It often gets confused with the introduced Indian Myna which is the brown bird. The one that I think's particularly important is the native honeyeater, the Noisy Miner – it's the grey one – and they live in sort of colonies, they're communal breeders, there'll be a family group that provides the food to a single nest and they defend that nest and they're very, very aggressive; they're called hyper-aggressive birds in that anything smaller than them and lots of things bigger than them they will drive out of their territories. And you see them 'round in Hyde Park here chasing - - -

JK: Currawongs.

RM: - - - currawongs, also ibises, quite funny, and the ibis will just sort of keep ducking and they'll come down over and over and over again at them, they sort of can't drive them away. And, yes, so when they get something into their brain that they're going to chase off, they do, but anything smaller than them. So that right across the eastern side of Australia, so through the woodlands of Australia and particularly in urban areas but also in lots of woodlands and the fragmented

patches of woodland in eastern Australia, particularly the roadside remnants and the new plantings people are doing to try and link patches, biodiversity corridors, unfortunately from a bird perspective seem to be being dominated by Noisy Miners which will just exclude all the small birds that these corridors are being built for.

24.25 And it's particularly obvious in Sydney where we've really lost most of our small insectivores and small honeyeaters but across much of Sydney you'll hear Noisy Miners calling and you'll even witness a lot of aggression between Noisy Miners and other birds. So they're another species that really likes the habitat that we provide in urban areas. There's sort of various theories about this. A popular one is that again it's that nectar resource that we're providing in gardens might be supporting these honeyeaters. I've had a student who looked at that, so compared gardens with grevilleas in them with gardens without and there's a much tighter relationship between the presence of Miners and eucalypts – so gum trees – than there is with the grevilleas, so I guess my thoughts are that they like the habitat structure most, that the gum trees are important, but then that barer understory so that we don't have a lot of shrubs but it's that grass with trees in it that seems to make perfect Noisy Miner habitat. And I think it's partially because it's defensible, they can see anything that comes into the territory quickly, and that it provides the food resources they need in the eucalypts too. So coming back to Birds in Backyards, this has sort of been the biggest challenge, when people say, "Well, what can I do in my garden to bring back all the small birds?"

26.04 And unfortunately birds aren't operating on the individual garden scale, it's the suburb scale that's important and so while we have parks, schools, golf courses, nature strips that are all trees with lawn underneath them and many people's gardens are trees with lawn we're going to be keeping Noisy Miners around and so it's going to be very hard to bring back small insectivores and honeyeaters, no matter how good a job you do of revegetating your garden. So what we're trying to do in Birds in Backyards is try and get this awareness across of the importance of planning in larger spatial scales and improving the habitat of whole suburbs.

JK: And why is it important to have that diversity of birds, the smaller birds? Why shouldn't we be just happy with currawongs and Noisy Miners and wattlebirds?

RM: Well, you're missing out on a lot, you know, and those little birds are fantastic. To be realistic, it's going to be a very big effort to get them

back. The reason why I'm keen to have them is because I think that is what this biodiversity is: you want to see a diversity of things and people need to be exposed to a diversity of wildlife where they live. I mean, we can't expect people to take an interest in the bigger issues, wildlife issues, beyond the cities if people haven't got a wildlife ethic and I think the only way you get a wildlife ethic is if you've got interesting biodiverse things happening near you. So maybe I'm painting too negative a picture when I say we've lost all the small birds. We actually have a lot of fantastic big birds and I think you're right, we should be happy to have Channel-billed Cuckoos and koels and currawongs in the garden and we're really lucky we've got a fantastic array of parrots in Sydney.

28.10 You know, overseas visitors coming in just can't believe it when they see Sulphur-crested Cockatoos and galahs and corellas, Rainbow Lorikeets and Crimson Rosellas and the whole other bunch of fantastic birds that we get in cities, that actually a lot of those parrots are more common in cities now than they are in their natural habitat. They seem to be cueing into some of the same resources, the increased nectar resources in particular for some of the parrots but, yes, also I think they're affected by people feeding them as well, that the seed people put out. It's a different habitat; it does have diverse animals in there. I guess that does provide people a lot of joy, to have parrots in their gardens, to have all these things, to feed the kookaburra or the butcherbird, that's all good. I'd like to see some small birds in there as well but maybe that's just my prejudice.

JK: Me too. Now, you were saying there was another category of birds that are doing all right, that they can fly in, use the resources and go out again, because I think you said there were two categories of birds - - -

RM: That we find using urban areas. So there are some that can survive all their lives in there. And, look, the wattlebirds do that very well, the Noisy Miners do that, and then there's some birds that you'll only see on the periphery of the nature reserves or intact areas. So if you're closer to the bush you'll get some birds like Red-browed Firetails coming into gardens or some of the honeyeaters and Silvereyes and Yellow-faced Honeyeaters and some of these things coming out and feeding in gardens and making use of the resource but they're not really able to spend their whole lifecycle there.

30.25 **JK: And so are there any places in the LGA that would have those types of birds that you were talking about?**

RM: Within the Sydney City LGA there's some places that have some birds you don't find right across Sydney and some interesting things. Through Newtown there are quite a few Fairy Wrens, smaller birds there. There's New Holland Honeyeaters there though I'm hearing from people that the Noisy Miners seem to be moving into those areas too and as the Noisy Miners are going in, people are losing their New Holland Honeyeaters.

JK: In Newtown, what sort of areas? Is that because of Sydney Park or where would those little birds - - -

RM: I've just heard from people actually in their backyards and it seems to have been that that in some of those areas there might not be a lot of – you know, it's not like people have big backyards but they didn't have a lot of eucalypts, whereas say the North Shore - people think of the North Shore of Sydney as this lovely, leafy North Shore that must be full of wildlife - actually it's got lots of eucalypts and lots of lawns and is really Noisy Miner capital. And so Birds in Backyard surveys, we've found more Fairy Wrens, for instance, in Newtown than we do on the North Shore.

32.00 **JK: And other examples?**

RM: I'm trying to think of some small birds in the LGA. Yes, no, look, see sort of Willy Wagtails across the place. They're not really a bird that's coming out of the bushland, they do quite well when there's patches. They feed in open areas, grassy park areas too. No.

JK: Do you think there's some hope of getting rid of the Noisy Miners and actually shifting that balance back towards habitat that will support the little birds?

RM: Look, I think there is some hope and I do think the Noisy Miner is a special case. There's some things I think, "Well, if there's a bird that does well in an urban area, well, good for it, it's good that something does" and leave it to its own devices and celebrate it thriving. The issue of the Noisy Miner is that it's not just in urban areas that it's a problem and it is really a serious problem for a lot of woodland birds that are declining, that are now on the Threatened Species List. So there is a group in Australia, a group of scientists, actually working on the Noisy Miner issue at the moment to try and identify what could be done to habitats to make them less suitable for Noisy Miners. And I feel that it is a big enough problem there's going to be quite a bit of work done on that so it might be a reasonable one to tackle within urban areas. It still comes back to people's values too, though, as to how much people care about them and, I mean, I'm talking from my

perspective here where I think the ultimate bit of gardening is to grow a Fairy Wren in your garden, is to have them then come in to you but it is very much your values and they're mine.

34.05

But we've got to put a lot of people in the place, in the city, and it's a question as to "Well, are you best to have a big sacrificial landscape of a city and not worry about the wildlife in it"? Better to do that than sprawl out across the rest of the country is one thought on it. Personally, I don't think that's the way to go because I think we then just become so disconnected with wildlife that it's hard to look after it in those other places. So my feelings are that we need to try and keep diversity where we live.

JK: Thank you. Yes, they were some things that I was going to talk about with you. I want to know about the currawongs because you did send me that article on currawongs and I must say I had no idea quite how many small birds they actually eat. So let me ask you about currawongs. Are they also to somewhat be celebrated and left to their own devices?

RM: Well, it's the same situation as the Noisy Miner. There's a terrific bird, the currawongs, beautiful calls, striking bird, they're intelligent, they're lovely to have around. I think it's two kilograms of nestlings that they have to eat of other birds in order to produce one clutch of their own, so they're very efficient predators. It's sort of getting to the stage now, though, where I'm not sure that they're going to be taking too many small birds in Sydney because I don't think there's that many of them left. So they'll be looking at other food sources that I mentioned earlier, that they used to feed on milk bottles when they were delivered.

36.01

I think we'll still see a lot of dynamism within birds and things will change. Someone was suggesting to me last year that currawongs numbers are actually declining a bit in the city. I haven't really seen any sort of data that supports that but some of these anecdotal things often turn out to be the case. We might be seeing the situation now that the Channel-billed Cuckoos are getting their own back, so we're not getting the production of currawongs that we used to but generally I wouldn't like us to sort of declare open season on birds for being too abundant and us saying "Well, we don't like them so we're going to go and shoot them or poison them" or that. I really think if we think there's too many currawongs around or too many Noisy Miners around, the approach should be to look at how we've changed the habitat and think how the habitat should be. So we could do a lot to combat the currawongs issue by more bush regeneration, getting

rid of some of those big berry producing plants from our gardens. These will take time and I think we are seeing change all the time in that regard.

JK: And I think you have done some historical research on birds in the Sydney region, is that right? Can you tell me a bit about that?

RM: Yes. I've actually already spoken about the small birds declining but I was trying to get some hard evidence of the small bird decline. So one way of getting at that question was to look at what might have been in Sydney a long time ago and what is here now and thought "Well, our Museum records, we've got collections in our cabinets here, going back into the 1800s, we've got a lot of specimens from the 1800s".

38.09 And so with Holly Parsons we looked at all the records of birds in our collection prior to 1900 and compared those with the surveys not by Birds in Backyards but by the Birds Australia Atlas - so these are actually well experienced bird observers - to look at what was here now and it sort of very clearly showed that there were lots of small birds in Sydney in the 1800s and the early 1900s, although really our focus was the 1800s. So we had lots of things, lots of flycatchers, thornbills, robins, wrens, all those small birds, lots of little honeyeaters too, were quite common in the collection. We didn't have a Noisy Miner record collection from Sydney; we didn't have a Rainbow Lorikeet from the Sydney region but lots of these small birds, so really it showed that the birds that have declined have been the small, mostly insectivores. The ones that have increased have tended to be the parrots and the larger carnivores, things like butcherbirds, currawongs, magpies too, which makes quite a lot of sense if you think of the foods: a lot of the small birds are insectivorous. At one level we don't like insects, people, so you could say there's been lots of pesticides. I don't know what our insect abundances are like now but we don't like insects and we don't provide the habitat for insects particularly well either.

40.07 So some of these birds like to feed amongst leaf litter or feed in dense understory shrubs, that insect layer again, so the foods aren't available and the shelter isn't available for them, for things that eat small food packages and small insects, but larger birds, whether they be the parrots or the larger carnivores, humans tend to provide a bit of food in that regard; we actually feed things directly with macroscopic things, things that we can see. They can feed on carrion, garbage, larger food items and the larger birds are the ones

that have done well. So that's the historic research we've done, was just trying to look at whether there's particular guilds of birds which have changed.

JK: And you've found that. And what about introduced birds and the relationship between introduced birds and native birds, those that have managed well and maybe those that haven't, can you give me a history of that?

RM: Well, there's a number of introduced birds that are now doing very well in Sydney. The most notable one would be the Indian Myna. We also have sparrows although their numbers have come and gone a bit and starlings and bulbuls; there's quite an array of introduced birds in Sydney. They, of course, if you looked in the Museum collections in the 1800s weren't in there because they hadn't been introduced and established. Nowadays the Indian Myna and the Spotted Turtledove are probably some of the species that people in Sydney are most familiar with.

42.09 **JK: And when did they turn up?**

RM: Oh, look, there was an Acclimatisation Society that was deliberately bringing birds in. I'd have to look up the actual dates but there have been several introductions for many of those species in different cities around Australia but, no, I can't tell you off the top of my head their dates.

JK: But some of them are quite early aren't they, I mean, some of those Acclimatisation things.

RM: Yes.

JK: So did the Museum not collect anything that wasn't indigenous?

RM: I don't think they'd become established at that stage. I think we had one sparrow – again I'd need to check that one – but I think there's one sparrow in the collection before 1900 but one thing is introducing them but the next is having them established to the point where people would collect them.

JK: And what is their relationship to the native and indigenous birds? Do they also push some of them out or change that, where they can live?

RM: Look, I think that's a bit overrated, that idea. I mean, it's certainly a very popular idea that introduced species are the sort of bane of the earth. I think that's sort of a convenience that we do to take the

pressure off our own responsibilities from creating poor quality habitats for them. So I think there's a lot of effort goes into control of Indian Mynas because we look at them and say "Well, this is something that's obviously an introduced species. It's common, so it must be having a big impact on other animals", whereas I think those successful introductions have been things that actually live very well with people and the habitats that people make.

44.19 And so we find them and not the native birds in the space often because we haven't got suitable habitat for the native birds. We have suitable habitat for the introduced birds, rather than the introduced birds driving the small ones, the native ones away. So for the Indian Myna, which is the most common – look, it's true, they will nest in tree hollows and so for birds like parrots which also nest in tree hollows there's the possibility that they will take over hollows that parrots might like to use. However, I've got a student, Adrian Davis, who has been climbing trees and looking in hollows and put cameras in hollows in urban areas or urban remnants and in remnants in National Parks and so he's sort of monitored over sixty hollows with cameras and had about twelve hundred visits from different animals to those hollows during the breeding season and he had not one visit from an Indian Myna. So that's the place where they're most likely to have their impact and in Sydney at least I don't see that happening. The other place that they're blamed for is for being aggressive towards other birds and small birds. Well, they're just not, particularly by comparison with the native miner, the Noisy Miner. I've had a student, Katie Lowe, who did her honours looking at that and she published a paper which showed that she'd measured aggression rates of different birds and the Indian Myna was just no more aggressive than any other background bird.

46.14 Compared with wattlebirds and Noisy Miners, their aggression was absolutely trivial. So I think these introduced birds are a convenient thing to blame things on. I'm not advocating them. I think exotic plants and animals have potential to do bad things and they can often be sitting in a sleeper phase for a long time before the impact really shows. So I'm not saying we should look after and value them but I think there's more urgent things to do in terms of habitat reconstruction than taking engineering type approaches of eliminating exotic birds.

JK: One little bird that people seem to comment on that they don't see as many of are sparrows. I come from South Australia; we just live with sparrows everywhere. Is that the case in Sydney?

I think you'd mentioned sparrows. Is that a bird that has disappeared as well?

RM: Well, I remember sparrows as being really common as a kid in Sydney and I don't see them that often now but I see them in particular places. If anyone keeps chickens, I always see sparrows around where people keep chickens. I suspect, yes, they have changed in abundance; they're much less common now. I think part of that is this change in people's activities and change in habitats too; probably there's less of those areas with seeding grasses and things but I suspect they've also been influenced by the Noisy Miner as well, that they're another small bird and they won't do well in areas where Noisy Miners are.

48.06 They've declined a lot in London, the sparrows too; there's quite a bit of concern for sparrows in England. I think that might be lead in petrol is the popular one, or anyway some fuel additive. I would be surprised if it was the same thing happening here but they have declined here as well.

JK: And so insects, that would probably be one of them too, just the same sorts of issues that you were talking about for the little native birds?

RM: Yes, although sparrows tend to be more a seed eater but I think it's the insects actually in London that they were getting their toxic doses from, so whether that's happening here or not I'm not sure but I think some of it is just that change in the availability of seed. And I mentioned the chickens because I do think more people had backyard chickens too when I was growing up and so there was always seed around for them. If you look at the grain terminal down at Port Kembla it's full of them. There's various places where they're locally abundant and often seems to be around a good resource.

JK: And are there other key bird issues that we haven't covered that come to mind that impact here in Sydney?

RM: Look, there's one that's dear to my heart. I mean, it's a lost cause but it's a nice example. I'm currently doing a project, studying – actually, back when I did my PhD on so I had the opportunity to come back twenty years on from my PhD on White-fronted Chats to look at White-fronted Chats in Sydney where there's two little populations left. They're now listed as an endangered population in the Sydney region of this species and it's now just confined to two populations, one at Sydney Olympic Park at Homebush Bay and one at Towra Point in Botany Bay.

50.13 So they're just two little patches. They're a saltmarsh bird and they like swampy areas but if we look at the Museum collections and early records of ornithologists going back into the 1800s they were found in these sort of swampy areas right across Sydney, joining Homebush Bay, through Ashfield and Enfield and down the Cooks River all the way to Botany Bay. They were across through from Centennial Park over to Rose Bay, so we've got records of them from a lot of places and sort of documented the decline of those that just as their habitat has continued to get smaller and smaller they've just become extinct until they're just confined to these last two habitat remnants left. So I mention that just because keeping the patches of intact habitat are very important for some species and it's just a really nice example of documenting the decline. And I expect that species will become extinct in the Sydney region in the not too distant future and then we'll have a gap between Nowra and Newcastle along the coast for a species that was once quite common across the region. So it's sort of just a nice example of urbanisation in general and how it's a sort of slow, insidious process and, yes, the timescale it takes.

52.03 **JK:** And I guess talking about that whole issue of urban ecology and nature, what does nature mean to you and in the context of these urban environments that we're talking about?

RM: I mean, I get a lot of inspiration from nature. Is that the sort of thing you mean?

JK: Why is important in a big city?

RM: It just adds a lot of richness to my life to see stuff. I mean, humans aren't the greatest species on earth; there's lots of variety there. I get a lot of joy when I walk up to the railway station and I see the Scrub Wren interacting with the Yellow Thornbill. Just, I don't know, people are fascinated by pets too; they add a lot to people's lives. Well, having a diversity of animals around for some people is something you get a lot of inspiration from. It's inspired poets and painters through the ages, inspire scientists too, inspires just lots of people. Gardeners love having wildlife coming into their gardens. So it's just one of those things that enriches your life.

JK: And what are the impacts that you see for the future? Given that you're saying that really it's important to have biodiversity and lots of things in this urban environment, what are some of the ongoing concerns that you see into the future?

RM: Well, I guess we're going to still more erosion of habitat. So we're going to see more subdivision, smaller blocks, smaller gardens, more organised playing fields, more council mowers, more manicured.

54.08 I think humans generally like ordered landscapes that don't have the messiness and the habitat complexity that contributes to a wide species diversity so I think we're going to see more habitat loss within cities. I think that's probably the biggest issue. I think there is potential to have better open spaces. I think we could be doing more in terms of planting shrub layers; that's the bit that seems to be missing. So there's a lot of degraded remnants along railway lines and parks and gullies and things like that that are quite densely weed infested now that we could put more of an effort into for wildlife, I think we can do more in our gardens. There is potential to make that matrix more suitable for animals, even if we lose more habitat. But, look, I'm not really familiar with all the places in the Sydney metropolitan area and it might be a very useful case history to have a look at because it has had the biggest impact over time so it could be the early warning place. So I think it is important to survey the areas across Sydney that have got wildlife value because we'll learn a lot from those from a much, much bigger footprint that we're probably heading towards in the future for a lot of Sydney.

56.11 JK: **I have been talking to John [Martin] about ibis but one of the things I didn't ask him about was in the article you sent me talked about lethally managed, that that's how ibis have been managed in the past. What does that actually mean? That's what I wanted to ask.**

RM: I think it's a euphemism for saying that people are destroying ibis in various parts of Sydney where they're a nuisance animal and so nest and egg destruction is the technique that is being used. I think that's actually rather a blunt instrument for dealing with the problem because often if you destroy the nest of these things it seems to be that they will nest again. Sometimes it is perhaps effective in that if you've got ibis nesting over a café and dropping things in the café, if you repeatedly remove their nest and eggs they will nest somewhere else, often nearby, so the next nearest palm tree they can find, they will move to that. But you've got to be quite persistent in order to discourage them; they might nest in that same place quite a few times. So that's one reason why you might do so, lethally manage, but I think it's also used because people are saying "Well, there's too many of them and so we will reduce the number by nest and egg destruction" but it's something that a permit is required for and so it'll

never be done on the scale required to reduce numbers so I don't think it's going to be effective in that way.

58.05

The only way it's effective is if it just deters birds from nesting. Generally what tends to be much more effective if there is a problem of birds – and I can see there's problems with ibis in particular locations, highly specific locations – ultimately it's "Get rid of what they're nesting in". So they like nesting in palm trees in urban areas, date palms, and if there's a date palm in some place that you really don't want to have ibis nesting, well if you get rid of the date palms - or in some cases they prune the date palms; we call it "pineappleing" because it ends up there's a little sprout up the top – if you could sort of get of the thing so there isn't a nesting platform the birds will go. Generally, I thin ibis are a fantastic bird in the parks. A lot of people just don't like them because they perceive them as being introduced, which they're not. They've moved into the city as the water inland has been dominated for agricultural use, so they've moved into more reliable habitats where they're doing quite well. The majority of them, I think, are fairly benign. They do come close to people but I think that's quite nice.

JK: And now Angel Place. I still haven't managed to get there but could you tell me about Angel Place and what's there and where it is?

RM: O.K. Angel Place is down off Martin Place and it's a few years ago the City of Sydney did the Laneways Exhibition and a variety of artists, installation artists, put in proposals which the City of Sydney supported to put installations in various laneways across Sydney to make them more interesting.

60.07

And an artist, Michael Hill, called me at the Museum because he wanted to do an installation which reflected on the changes in the birds of Sydney from the time that Sydney was built and he wanted some information on what birds might have been present in Angel Place because that's where his exhibition was. And he asked right at the time when I was doing my work, looking at the Museum records as to the Museum collection so it was a really opportune time and I sent him my draft paper on that and he said "Oh, wow, this is exactly what we want. Can you be on the team that put in the installation project?" So I was on that team as the scientific adviser for it and Michael was the artist and he installed several hundred birdcages in Angel Place and they're all empty birdcages, reflecting the loss of the birds in Sydney and from each birdcage there's a song coming out of a species that might have once been inhabiting that place. So it's

based on what the Museum records told us would have been in those habitats within Sydney before 1900 and so, yes, as you walked through Angel Place there's this soundscape of birdcalls coming and you look up and see these empty cages. I like it and it's had very good reports. It was a temporary exhibition and the City of Sydney then suggested that it be made permanent, so it's now been made into a permanent exhibition in Sydney, so go and have a look at it.

62.01 **JK: I definitely will. And do you think that is an educative process for some people?**

RM: Definitely. People reflect on it and you see them smiling and you see them thinking and, yes, I think we scientists bang on about habitat loss and stuff and don't always get a good hearing and we sound like a broken record some of the time. So I think all the different ways we can address these issues, the better and I'm sure that one works a lot for a lot of people.

JK: And I guess climate change is one of the things that people are more aware of. Have you got any comments about how that is going to influence how we live and the bird populations and the sorts of things that you work on?

RM: I think it's an interesting one in terms of urban areas in particular, because for birds I think water will be an increasingly short resource or scarce resource. I think we've already seen that with the ibis that we're now seeing in the city, which weren't here before 1970. They've responded to humans probably dominating the water, so there's now more water available in urban areas. I think we're going to see that with more things. Dominating resources: I think it's one of the reasons why trees in urban areas are so attractive for Noisy Miners, because we're dominating the water in the city so they're well watered and more productive trees a lot of the time. So I think, yes, global warming will have an effect on that and that'll have an effect on urban areas. But generally I think global warming just will intensify all the other issues that are already present so just generally there are a lot of problems in terms of habitat loss and degradation and fragmentation and global warming will increase the need for species to be able to move, so those fragmentation effects will become more important, it will change the nature of habitat so the degradation issue becomes more important. Yes, just generally I think that it will exacerbate other forces that are already present.

64.30 **JK:** **Well, when I paused before I think there weren't any other issues that you feel like we've not covered? We've been doing a pretty good range.**

RM: No, no, I think we've covered a lot of the issues, yes.

JK: **Thank you. That's been really great, really good. CJ Dennis we were talking about there.**

RM: O.K. So CJ Dennis wrote lots of poetry – when was it? – the early 1900s and he has a series on birds and he's got a fantastic poem on the Indian Myna, he's got poems on Fairy Wrens, poems on magpies, bowerbirds, the whole lot; there's a whole series of poems he did. He wrote for *The Age* or *The Argus* – I don't know what it was then – the newspaper, so a regular series of poems. But he's sort of almost a caricaturist in his poems in really getting to the essence of a bird and getting to the essence of an issue and I find it fascinating from historical perspective to hear him talking about habitat changes a long time ago and we're still talking about the same thing now. Yes, we're not getting a long way.

JK: **Or it is always just going to be an ongoing dynamic theme?**

RM: Yes, I suppose so. There will always be a conflict between what people want in their places they live and what animals would like in that place as well. Yes, very true.

66.13 **JK:** **Yes, and unless we're going to just do away with, somehow clear out all the animals – well, it's not even possible or shouldn't hopefully be.**

RM: Yes.

JK: **I was actually going to ask you, do you have some favourite places in the City of Sydney region where you go to find different birds?**

RM: Not so much for finding different birds. I sort of grew up right on the edge of Ku-ring-gai Chase National Park and I have very fond memories of that place. I love the sandstone vegetation, love the plants. There's caves that I used to go and sleep in as a kid and stuff and so I've got that very strong sense of Hawkesbury sandstone, you know, a White-eared Honeyeater coming and landing in my head and taking hair from my head for its nest. Not so much birdy places around Sydney but, yes, the Hawkesbury sandstone is very important to me and I love the saltmarsh at Towra Point in Botany Bay. I guess that's because I spent my PhD, five years, in a saltmarsh and I love

that saltmarsh vegetation and so there's just a couple of tiny patches left. In Sydney it's this habitat that's been right on the foreshore so it's been cleared for industry and drained and reclaimed and there's not much of it left but it's got beautiful, subtle colours in it. So it's probably more the habitats than the birds that get me in terms of the places.

68.05 **JK: And where do you live?**

RM: I live down in the northern suburbs of Wollongong at Coalcliff.

JK: Gosh, you live way off.

RM: So I live sort of sandwiched between the escarpment and the beach, right on the edge of the bush, so I'm very privileged in the birds that I have and I was thinking about my morning chorus the day before yesterday when the first things I heard were two sea eagles carrying on. There's a catbird, a bowerbird, a Lewin's Honeyeater, these were the sort of first sounds I heard in the morning, and I'm thinking it's actually very different from the constant sound of Noisy Miners that you hear over most of Sydney.

JK: Yes, good point. Thanks.

Interview ends