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Transcript of an interview with

Neville Marchant

b.1939 -

STATE LIBRARY OF WESTERN AUSTRALIA - ORAL HISTORY COLLECTION

DATE OF INTERVIEW: 2016

INTERVIEWER: Bill Bunbury

TRANSCRIBER: Joe Blake

DURATION: 61 minutes

REFERENCE NUMBER: **OH4222**

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**BB:** Identification. I'm talking to Dr Neville Marchant, who was formerly director of the WA Herbarium, and we're recording this interview for the Battye library in Western Australia. Neville, thank you very much for agreeing to talk to me. Where were you born?

**NM:** Bill, thank you for talking to me, because I guess I've had an interesting life, like all of us, and I was born in Cottesloe. Actually I was born in Buckland Hill, which was the earlier name for the Mosman Park area, where there was a small hospital where my mother was interned.

**BB:** Earliest memories?

**NM:** Earliest memories? I guess it was really a very happy life at Cottesloe beach. We lived at North Cottesloe, and it was just wonderful to have a playground that was so clean right in front of the house in Marine Parade where we lived, and had a very nice young childhood there.

**BB:** What were the sort of games and activities you remember most from being a kid?

**NM:** I think it was building dams and the - - when the waves came over the sand in the wintertime and there were big pools at North Cottesloe and I think that was a really great exercise, but also swimming in summertime of course, always on a surfboard, that is a rubber one, a small one, I was too young to have a bigger surfboard.

**BB:** Were the family influences in your childhood that remain with you, things that you learned, or values that you acquired, do you think?

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**NM:** I think so. I was the youngest of a large family, and there are great disadvantages in that, in that my brothers were much older than me, especially the eldest, who was some 20 years older than me, and that meant he was married - - very young, and he was married actually to a lovely person who became my sister-in-law, but they had a child who was only I think 7 years younger than me, so it was a very strange situation, so I never really got to know my brothers.

**BB:** Were there any early inclinations of the profession you pursued? Did you take an interest in wildlife and particularly flora early in your life?

**NM:** Yes, again, I think it was the beach that did this. To be able to go walking on Cottesloe reef, on the rocks, and through the sand hills themselves, and looking at the plants and the animals there, I was particularly interested in marine life. My mother was interested. She used to go, like orchids, and when we moved to Mosman Park later, after my father died, we had actually a - - quite a good bushland nearby. It's now gone to a golf course, but it was wonderful to orchid seeking there.

**BB:** Was your father an influence in your life?

**NM:** Look, he was - - he died when I was fairly young. I was seven, and he was ill for some time before that. He certainly laid the foundations to a good family. I think one of the earliest memories I have of him in the breakfast room, which was a small alcove in the kitchen, where we did gather, there was a Bushell's tea map of the world, and he was very keen on geography, as I am, and he used to say, even when I was four or five, point to France, or point to Paris or whatever, and that way I really had a love of geography.

**BB:** Schooling?

**NM:** No real memories of it. It was just an ordinary sort of schooling. I have fond

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memories of Swanbourne primary school, and a dear teacher there called Miss Jones, she was really very kind, and always had this saying just a jiffy, that remains with me, and I can remember her face. The other teachers, a bit nondescript, and I'm afraid I - - I don't know, some of them probably weren't very intelligent. I'm being a bit harsh there. But Mosman Park primary was average, and the high school was an awful memory. I've wiped that from my mind.

BB: Can you tell me why?

NM: I guess it was - - I was - - for some reason or other, my brothers were - - influenced my mother in that they decided that I should go not to the catchment school where I lived, which would have been Claremont, they decided I should go to Perth Boys, and it was a large school, I didn't know anybody in the school, in the year intake I was there, and I think they had a test to grade you into classes, but obviously my school had a different curriculum from the others. I don't think I did very well, so I just stayed at a low level in that school. And there were some nice friends there, some nice boys, but I really didn't enjoy the school at all.

BB: Your early interest in botany, did anything in the curriculum sustain that for you at all?

NM: No, not really. I do remember in year 3 we were actually growing little wheat grains on the window sill, but I think the teacher was fairly characterless, and really I think she was just teaching it because, I don't know why, but maybe because she found it a bit interesting. But I guess growing things is really a good thing, I really enjoyed that, but had very little exposure to biology and especially plant biology in the whole school years.

BB: So did you know at all what you wanted to do when you left school?

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**NM:** Well, it was decided for me in a way. I guess I did want to go into something biological, because of this early love of things on the beach, and picking up shells, and picking up all sorts of seahorses and sea urchins, washed up after the winter storms. But I guess it was because I was actually put out to work as it were. My brothers decided that I needed to really earn my keep, and - - because mum wasn't very well off, and I - - like a lot of people in those days, and I think I really was pushed into going to work, and I was interviewed, but I found it was cursory, because I really understood that an uncle, who was undersecretary for lands at the time, actually organised a job for me. I did have an interview as I said, but I was put to work with Mr Gardner, CA, the government botanist, Charles Austin Gardner, when I was 15.

**BB:** In 1955?

**NM:** That's right.

**BB:** Yes. Did you take to it?

**NM:** I did. I enjoyed it very much. He was a charming old codger, but was a very interesting man. He obviously - - I was warned that he didn't really understand or like children, so I was very careful with him. I found out that he was really quite a really gentle person, and he was very kind to me, and I guess I was no threat to him, because he was an interesting character, as I said, he was a bit of a dog in the manger in his field, and I don't think he liked competition, but I certainly, at 15, was no threat to him whatsoever.

**BB:** What did the work involve?

**NM:** I was looking after the herbarium. I was really rather exciting, it's a very small place in those days, and the building was situated in the observatory buildings in West

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Perth. The weather bureau. Just a few rooms downstairs, and it was a beautiful situation, overlooking the city. And the herbarium only had about 50 to 60,000 specimens, mostly of Charles Austin Gardner himself, and there was a fair bit of care and maintenance, but a lot of new material was coming in. One of the great big projects I had right from the word go, was to actually prepare for mounting and putting onto cardboard sheets, all the collections that came from the Northern Territory, a big expedition, the Specht expedition to Arnhem Land, and that was fascinating.

**BB:** Was there any work from the earlier botanists like Drummond and the 19th century pioneers of botany at all, was there any of that material there?

**NM:** Very little material was there from Drummond in those days. Later - - it came later on. But unfortunately you see the herbarium started very late in life, and as a result, it didn't really acquire some of the early specimens, which went overseas or to Melbourne. And later on, in my own right, I was able to gain some of these back for the herbarium itself. But at that time, there weren't very many, though there were a few old things, especially when I was asked to tidy up cupboards and found really old specimens that I found fascinating.

**BB:** Was this a kind of autodidactic process by which you learned as you went, or did you have a mentor in Gardner?

**NM:** Wasn't really a mentor. Though he was very good, and had this marvellous sense of humour. I remember once when he asked me to - - if I'd like to go down to town hall where he was giving a public lecture. He loved giving these lectures extemporare, and he would really, really beam forth, and I said no Mr Gardner, and he said would you like to come? Do you think you'd learn anything, and I said no, Mr Gardner, I really had a dental appointment, but he didn't let me say that, and apparently he opened the public lecture by saying I said to my assistant, would he learn anything,

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and he said no, so I suffered from that because an aunt was in the audience, and I had a feedback later on.

**BB:** Did any of this experience enter your consciousness in terms of employment? Did you see a career as a botanist?

**NM:** Yes, I did. Because I think I had this grounding where I had a love of the flora and I was really beginning to understand diversity, though I didn't really understand diversity per se I guess. I was just the richness of the flora. I was beginning to learn lots of things about the flora itself, and there was an opportunity of me going to night school, and my mother was very keen on promoting education in all of us, and we all did fairly well in education circles, and what she wanted me to do was to go to night school so I went to Leederville tech, and I did biology, and this was absolutely wonderful. I remember my first look down a microscope was just enthralling to see all these things moving in a drop of water, and that stayed with me for the rest of my life, that experience.

**BB:** And what age was that ...(indistinct)...

**NM:** I must have been about 16, 17, and then I took three years to do a university entrance, which in those days, was the leaving, and I was able to gain entrance to university, and so I resigned from the herbarium. And I attended university full-time, and really loved doing botany with Professor Grieve.

**BB:** That was an honours degree wasn't it?

**NM:** I did an honours after the three year of the ordinary degree. And then after that, what happened was Professor Grieve asked, four of us were invited, four of us in the same class, to actually stay on as graduate assistants, and I did that for a few years, because I loved teaching, and it was really interesting dynamic time for learning and things in

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botany were progressing. Professor Grieve was writing the series of Blackall and Grieve, how to know West Australian wildflowers, and so I really became marginally involved in that, but I was there, on the sidelines, until I got a scholarship to go to England.

**BB:** What was being learned about WA flora at this time, because flowers are flowers, but they grow in soils. Were we beginning to understand the nature of the terrain in which these flowers bloomed?

**NM:** I think we were. But most of the pressures came from economic areas, because for example, Charles Gardner really only accomplished a few publications to do with the flora, lots of general things, but real scientific publications. One was the grasses, because of the economic importance of these in the pastoral industry, and the other was the poison plants, so that's really his two areas where he made great productivity, and I guess at that time though, we are more interested in documenting what was present, because we just hardly - - knew hardly anything about the flora in Western Australia.

**BB:** In terms of its range?

**NM:** In terms of everything really, particularly what was there, because it was very difficult to identify things as being new or not because we didn't have the original material with which to compare it, from these early collectors I referred to earlier, people like James Drummond, his specimens, as I said, were in Melbourne or England or various places around the world, and it's very hard to communicate in those days to find out whether the thing you actually had discovered in the bush, whether it was really new or not, so there were lots of problems like that associated with just documenting the flora.

**BB:** It's making me think too of course as Europeans we've changed this landscape. Did

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that affect the way you could actually look at what was original or not?

**NM:** Look, I think when it was - - when we're talking about the late '55 to '60 we knew there was land clearing going on, but it really wasn't to the same extent as it was much later on. And I think really with the different and change of climate we now know has been with us for some time, and things becoming dry in the south-west, there have been enormous changes. I think one of the things that tipped the balance was say Cyclone Alby in lots of areas, which stripped away lots of the soil around roadsides et cetera, or dumped soil on the road side, and spread weeds, and I think it was really the rise of weeds has been phenomenal, and I don't think we realised that in the '50s and '60s.

**BB:** To come back to your own personal interests, where were you looking at this time? You've described the utilitarian approach of dealing with pastures and improvement and so on, but were you developing a specialised interest yourself at this time?

**NM:** Yes, I was. I guess I got fascinated by a group of plants called the sundews, which are insectivorous, and there's a great deal of interest in them in the world, but again it - - studying that group just reflected to me the diversity we've got in Western Australia, because here you've got a genus of plants called *Drosera* that's around the world, on every continent except Antarctica, and it's really diverse in south Western Australia, so why - - why is that? So that's something that an interest has been remaining with me and working on for a long time.

**BB:** Were these very distinctive parts of that overall pattern of plants?

**NM:** I think so. By that you mean was this actually typical of so many things that's happening in south Western Australia? In a way that's true, because I realised that thing like *Banksia* a colleague was working on, was actually so diverse in south Western Australia yet a few species reached South East Asia. Well, why was that?

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What was the history of Australia? So I started accumulating knowledge about what was really the evolution of the West Australian flora, from very early times and the break up of Gondwana to the present.

**BB:** You chose Cambridge for your next pursuit of study of a doctorate. One would wonder why you'd go to the northern hemisphere when you were looking at biodiversity in the southern hemisphere. What was the choice of Cambridge guided by?

**NM:** Well, it was interesting, I actually wanted to go to a course in taxonomy at Liverpool, and it was run by a man called Professor Davis, who had published a marvellous text, and so I wrote, and was accepted, but Professor Grieve called me in one day and had a chat and he said look I think you'd be better off going to another university, and try and go to Cambridge, and I thought well why is this, and he explained it to me as really not the subjects you'll study in Cambridge, but it's the experience you'll get, and he was right, because what happened, and I applied and got accepted to Clare College in Cambridge, which is a college that enables you to be accepted, and you have to apply to the board of graduate studies, and the board of graduate studies accepts you, on one condition, that is you're accepted by a college and the college incidentally, accepts you on one condition, you're accepted by the board of graduate studies so when the letter arrived in the same mail from England you photocopied one and sent it to the other, and so you're in, which is rather interesting, but my supervisor turned out to be a very famous flora writer, working for *Florae Europaeae* project, so here we had in Europe a coming together of all the nations of Europe from Russia and westwards, to England and Ireland, getting together and meeting and deciding to publish a flora of the whole of Europe in English, so with that experience I think it was really interesting, and I was involved in a very small way in this, but attended workshops and seminars so I was able to really play a part in the development of such a concept in Australia, a very minor part.

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BB: Was it an exciting time intellectually?

**NM:** It was. It was strange, because I guess I was lonely. It is hard to get into English society. I made lots of friends, but most of them were foreign like me, and we had some real fun. But I'm afraid the best thing I ever did was actually I had a car, because I had an Australian legacy scholarship, which set me up very well, and I'm very grateful for that, because I'd never have survived otherwise, and it was really interesting because I could go to the continent. And my supervisor again, with all his connections, would say I want you to go and work in southern Sweden for a week or two, and then go to Geneva and so on, to the herbarium in Geneva and to the herbarium in Lund in southern Sweden etcetera. Copenhagen and many other places. So that way I got to really know the collections in Europe and met some very interesting people indeed.

BB: I've heard you describe some very interesting experiences in places like Yugoslavia. Was this part of the same period?

**NM:** Oh, yes. When I first arrived at the botany school, in Cambridge, there was an excursion being planned in the summer holidays, by my supervisor, to actually Yugoslavia, where he had contacts with a professor of botany at the University of Ljubljani, and they had a field station on an island called Rab, so there was an opportunity to go on a really interesting excursion. And I think it was really marvellous, but I had my first taste of being an alien and an odd colonial, because I can remember attending a meeting in this lecture theatre in Cambridge, in the botany department and my supervisor was talking about what we must to prepare ourselves to go on this three week excursion to Yugoslavia, and he said are there any queries, any questions, and one person down the front, who later became a friend incidentally, he put up his hand and said Doctor Walters, I think we're going to have a real problem, because we've really got a person here who might not be accepted into Yugoslavia because he hasn't got a British passport, and I thought I wonder who that

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is, because I didn't have a British passport, I didn't think it was me, but anyway he said yes, it's Neville Marchant, because he's Australian, and I was a bit flabbergasted, and my supervisor said, Neville, what do you think, I said there'll be no problem. Well months later we were on the train entering Yugoslavia from Austria, and one of these men came on, because it was Communist in those days, and - - Yugoslavia that is, and he had a gun and everything else, coming down the train and collecting passports, and he looked at me and said, Australian, I went yes, he said, ahh, and he greeted me with open arms and said did I know his auntie who lived in Fremantle, and he - - she ran a hotel, particular hotel, and I said I know the hotel, I had passed it on the highway, on Stirling highway, so I knew where it was, I certainly didn't know his aunt, and he welcomed me with open arms. Well as soon as he left the carriage, I looked at the person who'd stood up in that classroom months before, and went na-na-na-na-na. So I enjoyed that.

**BB:** There were some distinct advantages do you think in being non-British in that situation.

**NM:** Oh, yes, because even in Yugoslavia I found - - I found the food in college in Cambridge was absolutely awful. In fact I developed - - what do you call it, vitamin C deficiency, and scurvy, and I remember going to the doctor and he said I'm afraid you're Australian, I said, what do you mean? And he said you're suffering from vitamin C deficiency. You've got Scurvy; I said oh my God, I thought you got rid of that with Captain Cook. He said not in the colleges. So I was able, in Yugoslavia, to actually buy figs, and the English people didn't like figs. They'd had dried ones, but not fresh, so I cornered the market, and I'm afraid I bought figs every day and thoroughly enjoyed myself. I think I got a lot of vitamin C out of those.

**BB:** A good time on the whole?

**NM:** Oh, yes. Yes. Made some good friends on that trip. And there were other trips as

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well I was able to go on as well.

**BB:** There's one lovely story about English social manners which I've heard you talk about, was going to a friend, and the friend had warned you about the sort of protocols of English society. I'd love to hear that one again.

**NM:** He was quite upper crust and became a lovely friend throughout my life, and really he - - Martin his name was, I won't give his surname, but he said m-m-mother, he had a very bad stutter, and mother would like you to come down for the weekend, and he gave me instructions of how to get there so I duly drove down. But he said, before I went down, he said you must read this book, and it was noblesse oblige, of how to behave in upper crust families. Well I was really insulted at first, I thought this can't be - - well, I read it, and so of course I arrived at this house and the first thing the book said was when you arrive on the circular driveway, which they had, do not scatter the stones, which I did, and then it said, you must not ring the doorbell loudly, which I did, and when your hostess or host answers, you mustn't say pleased to meet you, you have to say how do you do. Well, I opened the door, and to my horror this large lovely woman came through and said, pleased to meet you, and I said I'm supposed to say that, and she said yes, we know, we gave you that book because we knew you'd do exactly what it said not to do. So I was set up, and fell hook line and sinker.

**BB:** A nice introduction to English eccentricity.

**NM:** It was lovely. They became very firm friends, and I often went down there and enjoyed myself. And I can remember even answering the phone one day, and Mrs R, said to me, Neville, do answer the phone, and I answered the phone and I said the Rix - - I've given the name away, doesn't matter, the Rix house, and she, it was the vicar, and he said what he wanted and I said Mrs Rix, he wants to borrow a car, and she said tell him he can have the mini, so I said you can have the mini, and then later on we

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went to church and they had the pew down the front, which is reserved for them, the squire of the village, and it was just a wonderful experience being in that, exposed to that, but they were down to earth people, and really lovely.

**BB:** You returned to Australia, having finished. What do you take up then?

**NM:** Well, I was very lucky in many ways, I've been quite lucky throughout my life with jobs. And a year before I finished my PhD, there was a job advertised at the herbarium in Western Australia, where I'd started so many years before, as a 15 year old, and Mr Royce by this time, was in charge, and he actually wrote to me and said it was coming up, and I want you to apply, and I did duly apply, and I was interviewed at West Australia house in the Strand in London. I drove down, or took the train down and had a nervous sort of interview, but it was really quite interesting, and I was offered the job, so I took it, so I had really almost the last year of my PhD knowing I had a job to go to, which is just a wonderful feeling, and so I duly finished, had my oral exam and then packed my bags and flew home to Western Australia to the job in the herbarium, which I think was just wonderful to come back full circle to start there again.

**BB:** When you started as a teenager you were doing a much more clerical job in a way, weren't you? You were writing up materials. Was this now fieldwork?

**NM:** Well, it was some of it. Because what I was doing there initially was actually all the preparation work, the preparation of specimens at the herbarium, and the maintenance, doing labels and doing all sorts of folder maintenance and things like that. Well, I certainly didn't have to do that when I came home, but the problem was, in those days, the herbarium, there was an expectation that it would identify specimens for people, and hundreds of people were collecting plants. They might have been interested farmers, interested amateurs who were taking photographs, or people who just wanted to know what the flora was, and they'd send in bundles of

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specimens. The most important people of course were people like Harry Butler, who were going to way out places, and wanting to know what things were, and they would send bundles, as well as university people who were studying things like rhizobia or certain genera, and they would send specimens in and it was a job of a lot of us to spend time identifying these plants, and of course that was very time consuming, because there were no textbooks in those days for Western Australia except Benson, the last volume of which, covering the whole of Australia, was finished in 1863, so it was pretty ancient stuff.

**BB:** So in effect you had fieldworkers in a way sending you material?

**NM:** Yes. And there wasn't much money for travel, but I did do some. And then I took on an interest in actually a fair number of genera, again the drosera I mentioned earlier, I was able to do a study of that for flora of Australia, and then moved on to other things, but a lot of time was spent just doing routine work, and it was an overwhelming amount of work to do with the herbarium. I wasn't a very good field person. I didn't really enjoy collecting plants too much. I more wanted to go to the field and look at them in the field, and so wasn't a very big collector of things. But I liked to collect knowledge and store that.

**BB:** Did you detect at this time an increasing interest? You've mentioned farmers for example, and people like Harry Butler, sending in stuff. Did you detect an increasing interest in what we had here, rather than the European sense of flora that dominated so many gardens for a long time?

**NM:** Oh, yes. Look, I think so. It was a very exciting time, because you had people like George Lullfitz, who were coming to the fore, and his father before him, and his uncle before him, I should say, who really had this intense interest in the flora. But also there was a very great booming time for the Western Australian wildflower society, and they asked me to give talks, and I do enjoy giving lectures, and trying to

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impart knowledge and a love of the flora, an appreciation of it to people, so I became very much embroiled in the amateur societies. I saw these as a real avenue to discovering more and more, and overcoming the shortage of trained people to actually document the flora. I think that's another thing I learned in England, my supervisor was very much wrapped up with people who were really amateurs, so-called, who really were professional in their own right, in their knowledge of the flora.

**BB:** Was the role of the herbarium changing by this time, from the time when you first worked in it as a teenager?

**NM:** Yes, it was changing to a certain extent. I think there were more demands to do things, scientifically. The Australian herbaria had met every year at the heads of herbaria meeting, and I think they were becoming more geared up, and more towards doing a national flora, the flora of Australia, and there were moves actually to do the - - this in sometimes a piecemeal way. I decided in my own right later on, in my career to really do something about the lack of handwritten and books to the flora, and start one for the flora of the Perth region, and that was the first one I attempted, and drew up plans to cover the whole of Western Australia in about 10 years.

**BB:** You mentioned teaching just now, and giving lectures. I notice that you were seconded to at least two campuses to talk about your work. Was that supported by the herbarium?

**NM:** Yes, it was. I guess again Mr Royce had a good vision for the future. He realised that there was a need to really train young people to appreciate the flora, and I saw it with my own career, in fact I did try to move out of the herbarium, and I was successful, in getting a job in actually fisheries and wildlife, but unfortunately the people, the powers that be in the herbarium decided that really they didn't want to lose me for some reason, and I missed out on that opportunity. I'd like to have moved more to the field of ecology, and often regret that, but I was asked, and it was actually insisted

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that I stay on in the herbarium. I guess in a way I'm glad I did, because I came to lead the institution after a number of different heads before me.

**BB:** I'm interested in that move towards ecology. Were you looking for a broader sense of the environment in which everything lived?

**NM:** Yes. I wanted to be able to use my knowledge of the flora for more practical things. I found I wasn't really interested in just collecting and storing knowledge per se. I wanted there to be conservation outcomes of that knowledge, to actually use the information that was locked away in the herbaria to identify what areas needed to be conserved, what geographic areas need to be conserved, that is, and how do we conserve them, just to document against the specimen information, just exactly how long things lived, how they're germinated, and we had - - there was an opportunity for that later on with the development of computer technology.

**BB:** In 1985 you get a Churchill fellowship. Where does that take you?

**NM:** That was very interesting, because I've been for some years interested in a Russian botanist called Turczaninow, or Turchaninov, his Latinised name, and he'd published about 400 species of West Australian plants, and I thought wow, he did this living in Russia. Why, and what's the reason for this? So I started delving into his history and how he obtained the specimens, most of which were collected by James Drummond between about 1829 or about 1830, and 1863, and this person in Russia acquired these specimens and worked on them. But where were his specimens? What was the material like? Was absolutely essential that we find out what's there so again we could actually really regard these specimens, the original ones that Turchaninov studied as kind of title deeds to species, so what exactly were they? Were they the same as we now call that species, were there other names that needed to be invoked et cetera? And I found out through some searching in the literature, before the days of internet, the specimens were likely to be in Kiev, but I couldn't really find out and it

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was very hard to communicate with the Soviet Union. Australia had broken off scientific relations, there was that Korean airline disaster, and a few other things where Australia wasn't exchanging scientific information. It was very hard to really find out what was going on. I had a breakthrough in 1982, when I went to the international botanical congress in Sydney, and there was these two people in a foyer, and they looked Russian to me, and then I sidled up to them and one of them was actually talking Russian, I could recognise the language, I'd learned a little bit myself, and then I asked if they were actually from Soviet Union, and one of them said yes, I said do you know of the Kholodny Institute of Botany, which I knew the specimens of the Turchaninov, that's where they were housed, and he said yes, I am the director of that institute. It was unbelievable. So I said - - I explained what I wanted, he said you'll be very welcome to come and work with me, and I said that's interesting, because I do need that sort of personal invitation. Would you write to me and ask me to come, and then I can apply for a grant, and he did just that.

BB: Despite the Cold War, you could still do that?

NM: Yes. It was really great. And so in 1985, I was awarded this Churchill Fellowship. I was interviewed by the then director of education called Bob Vickery, who became a friend later on, and still is, and I can remember Bob asked me a question, something with which I've had to put up - - with which I've had to put for the rest of my life, most of my life, and that is he said why on earth would I want to support - - we want to support someone who's going to study a pile of old sticks, meaning herbarium specimens, and I thought wow, so I must have answered it well, because I got the scholarship, so in '85 I set off.

BB: It's probably a very good question actually.

NM: It was a good question.

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BB: It provokes you to - -

NM: Absolutely. It put me really on the spot. And it is hard to justify why you want to study old material, but anyway, he gave - - or they gave me the scholarship, the panel, and I was able to go in '85, and that was really a very interesting experience.

BB: Were there highlights?

NM: I guess there were highlights, and that you couldn't really organise your tour very much, because In-tourists in the Soviet Union did everything for you. You'd have to give the dates, but they made a botch-up in my arrival time. I arrived at the Russian border coming by train from Berlin, at 10 pm, but my visa was that for the next day, and not 10 pm the day before, and so I thought oh heavens, and they took me off the train at gunpoint and they actually - - this young intern was absolutely very trigger happy. I thought my God, I'm going to be shot here, but the people kindly put all my luggage out the window. I was in a compartment of this huge train with some Polish people. But anyway I was marched out of the carriage and I was stood on the - - on the platform and folded my arms, and I was going to take my shoe off and bang it on my case, because that had been what Kruschev had done in the United Nations some months before, and I thought it might have an effect, but I didn't do that, but anyhow I folded my arms and just said no in Russian, I'm not going anywhere in my poor Russian, and I demanded to see a senior officer. And this young man was very intent, very angry, and was really furious with me, and the whole train, the people looking out the carriage and looking at me, aghast, there was this person here standing up to authority. So along came a senior official and he spoke English and said what was the matter? And I said stupid In-tourist's fault, not mine. I want to be on that train to Kiev. So he looked at my passport and looked at me and spoke to me on what I was doing, and he was very nice and he said yes, hop on the train. So the people rushed off the train and carried my luggage on, and I was absolutely - - it was marvellous, I was shaking a little bit, but anyway, I was taken to my compartment with people

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patting me on the back, and they were whispering, and they said what did you - - what happened, and I told them, and I said why are you whispering? And they said there's an official in the next compartment, and I said how do you know, and they said he's on his own so he must be important. And then I thought anyway, there was a knock at the door of our compartment, and this large Russian looking man came in and said what was the problem, and I told him, I said the stupid In-tourist. He said my brother is head of In-tourist. You will come with me to the dining car and have a vodka. And he took me to the dining car, well, that was absolutely incredible. It was a long train. And I hadn't gone down there before, and all these kids were singing in the dining car. They were singing the theme from Dr Zhivago. I couldn't believe it. And they stopped singing, and this Russian official said to me, did you notice these young people stopped singing when I arrived? I said yes. He said I will only stay a little while, so you can talk to them, because they know I am an official. He bought me a meal, which was really good, because I had no local currency. You couldn't take it in. There were real problems, and he bought me a chicken meal, and I didn't have vodka. I was advised not to touch the stuff and I didn't, the whole time I was in Russia, and so I just - - I had a cognac though, and the young people as soon as he left, they all said where are you from, where you from, and so I had a ball. I don't think I went to bed that night.

BB: What a great train ride.

NM: Yes.

BB: Well that's a great highlight. Within 3 or 4 years, you're also working in Asia, aren't you, because you get involved with the UNESCO project.

NM: Yes. I had this marvellous friend, Professor Jack Cannon from the University of Western Australia department of chemistry, and he had a network of chemists in South-East Asia who were working on plant products, that is chemistry of plant products, and he had a marvellous team, some of whom had been trained in Western

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Australia over many years, and they'd gone back to their country and were leading really researchers in their country on natural products and he found - - Jack Cannon found that there was a real great problem when they were working on natural products, particularly plant material, to identify the plant material, and they really needed the resources of the herbaria in the various countries so Jack Cannon put it to me that he wanted to start a program to improve herbarium facilities in South-East Asia, and so we had to put a case up to United Nations and it was approved and financed, and I was appointed to lead the botany 2000 program, which is designed to improve the lot of various herbaria in South-East Asia, between - - between India and the Philippines, including southern China.

**BB:** It's a big task.

**NM:** It was a huge task, but we had a number of workshops, training workshops, was difficult organising them because you had to operate with fax, and was very hard to get faxes into some of these countries. I had one at home so that was okay, but it was a lot of work, but I really enjoyed it. I made lots of friends and people were so enthusiastic, and so eager, if they could get money to go onto a conference somewhere and share their experience with other people, it was just a marvellous boost to their careers.

**BB:** And of course some of these countries were much poorer than Australia, so you would be really dealing with areas which weren't as well resource based as you were.

**NM:** That's right. And another thing too, they were being ripped off by companies coming in, and taking their intellectual property in the form of medicines of their age old medicines practice of exactly what plants have medicinal values, and these were being screened by Western companies, with very little spinoff to local people, and we tried to arrest that. And there was a meeting organised by Professor Cannon and his colleagues in Manila, and we developed what was called the Manila declaration. I

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actually did the first draft of that, and then it was modified and then published and accepted by the government, of the Philippines.

BB: A good time?

**NM:** It was marvellous, yes. Again, lots of very keen people and marvellous trips to Asia and really good. I got very wary of food. I had to be very careful not to get ill, and I've been to India a number of times. I don't think I had one bit of illness from India, because I really watched what I ate and drank, and it was just a marvellous experience.

BB: In 1992 you become appointed to a position at CALM. What happens here?

**NM:** Yes. Well, there was an excellent director of the herbarium called Jim Armstrong, who's a breath of fresh air. He came from Sydney. He was dynamic, he had a wonderful vision, a long term vision. The herbarium had been gathering data together into databases at some time, but it was never really realised just exactly how powerful this gathering of information could be where it could be delivered and Jim certainly had a vision for that, which I was able to carry on later on, but he actually asked me to be his deputy, and I accepted very gladly. I really enjoyed working with him. As I said, he was a visionary. He was later syphoned off to a big job in Geneva, with CITES, and so was rather sad to see him go. But I was able to step into his breach, and then apply for his job and got that as head of the herbarium.

BB: The work at CALM, was that - - because CALM was largely of course associated with forestry these days. What was the botanical link that was important here?

**NM:** I think it was - - I realised that the herbarium was an enormous data bank of information that could be really used to great advantage in assessing the worth of the reserves, the reserve system, and also leading to the gathering information which

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would enable management of the ecosystems, the management of rare and endangered species. Unfortunately we were forced in a way to have too much accent on rare and endangered species, which I personally thought was a bit of a danger really, because why would you concentrate on one single species and saving that when really it was the ecosystem in which that species lived which is far more important to save, and besides, we hadn't really documented very much, so by saving ecosystems, you were saving much more than we really had documented to that stage.

BB: Back to the ecology again?

NM: Back to ecology. And a broader approach.

BB: Because as you say, you have to have habitat for both flora and fauna, and you thought that was really the essential thing to correct.

NM: That's right. Because I think I worked out that some times it'll cost hundreds of thousands of dollars, in fact much more in many cases, to save an individual species, but invariably that species is really - - is often doomed because of the amount of clearing and weeds, increased bushfires, poor management et cetera, et cetera, and so that money would have been best sunk into the saving of a few reserves.

BB: There's a lovely phrase by an English novelist, Ian Forster, only connect, does that apply to the work you do as well as to human feeling and literature?

NM: Oh, yes. By that do you mean actually what, working in collaboration with all other people in all sorts - - as a broader front?

BB: I think what he meant was that everything is connected.

BB: Ok, yes, I see what you mean. Well, I guess I was jumping ahead of that and thinking

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about everything certainly is connected. And I think actually one of the great things that really is very difficult for people to do is to work together, to connect together not only their own research, but also with the community. And that's again what I tried to do in building up this regional herbarium project, because you have in the countryside people who've been living in a particular area for years and years, perhaps all their lives, and they'll know much more about the ecosystems, about the plants, the animals of an area, than I'd ever know, or any of my colleagues in zoology would know. So why not tap into that information, and really, that was getting off the ground, but was very hard to fund. It was sort of regarded as being a great imposition on the agency, the conservation agency, but I wasn't, I was really trying with people - - ... (indistinct)... were critical, had read the newsletter, would have found that we were trying to get funds by the individual organisations in country towns tapping into the natural resource management groups et cetera, which were well funded at that time.

**BB:** Was this material the kind of either oral history or diaries or photographs or just general conversations about - -

**NM:** All of these things, I think it really was. I mean an illustration is a man who phoned me once and said you know, I've always been sort of interested in knowing about the plants, and as child used to drive, going to school in the school bus, and I saw this tree - - it was a shrub actually, and I really didn't know what it was and it flowered at the same time every year. Eventually I was a part of this regional herbarium project, I got a specimen of it, had it identified, put into our local herbarium with a duplicate that was computer linked to the one in the Perth herbarium, I found out what it was, and no wonder I thought it was unique, it was an only tree of its - - only shrub of its kind for the nearest 100 kilometres. So it was really out of place. And I thought that's the sort of thing that I really wanted, because isn't it great to document that and know that really it not only is a specimen from a particular area, but that specimen is the only one of its kind in that area, so you get an idea of rarity and how ecosystems are really composed of various elements.

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**BB:** Am I hearing you describe your role as director of the WA herbarium, are these the kinds of aims you wanted to pursue?

**NM:** Yes, very much. But it took so much effort. At one particular time we had \$900,000 a year in funding, external funding, but of course there was a lot of reporting for that. You had to really report what you'd done with the money. But sometimes it was very difficult to get people, again this idea of with my interview for the Churchill Fellowship, why do people want to collect old sticks? Or some people would say well, you've collected this before, why do you want more material? And I used to try and answer this by saying but the specimen we collected 20 years ago was from sandy soil. This is actually from clay soil. Is it the same thing? Is it different? And we're trying to really say or document what species the tolerances are, where again this ecosystem thing, and I used to use the point, I'd say, say if the climate's drying and becoming more salty, we want to know, to plant up areas for rehabilitation, where to get the material. Now wouldn't it be great if we had information about a really salt tolerant paper bark that was super-salt tolerant. In some cases it might have been closer to the coast, it was relatively salt tolerant, but inland it was really incredibly so, so why not use that incredibly so salt tolerant one for your rehabilitation to really advance, or rather bank for the future, future changes.

**BB:** Well, that has implications for agriculture doesn't it?

**NM:** Yes, it does. Yes. It does.

**BB:** With increasing salinity.

**NM:** That's exactly right. Yes.

**BB:** Was some of that work put into practice?

- NM:** I guess I don't think so, not really. Because funding ran out and again, taxonomic botany, the science of classification, became just an old fashioned thing, and couldn't get funding, and now I think herbaria are in dire straits. They're really just languishing and really I guess it's sad in Western Australia's case, because we're still doing this alpha inventory, this initial inventory.
- BB:** It's another case of only connect isn't it, because some farmers for example are creating corridors where flora and fauna will survive. They're actually looking at what you've been talking about, the ecology. Did the herbarium play a role in any of those sort of areas?
- NM:** Only in so much as identifying plant material, but I think it did in a way, because as I mention earlier, we were very fortunate in having people like Jim Armstrong had a vision, and then I was able to carry this out through a few lucky breaks, where we had a team of IT experts. I'm not an IT expert, I'm a consumer, but I knew what we wanted, but I was able to inherit a team of people who were really good at computer technology, and they were really tired of being asked by various people to fix their printers or their computers, and they really wanted to get into something meaty, and I was asked if they could be housed at the herbarium, and I jumped at it. It was a wonderful opportunity and a really great team of very bright young kids, who really had this vision of actually putting things on line. And I think we made a tremendous breakthrough in the West Australian herbarium in having the development of Florabase. I didn't do it. I just led this team that actually did it, and I was very fortunate in having really this team who would really - - had shared my vision and developed them even further and had the means and brains to do something about it, and I think that really was something that laid the foundation, that was really unique in the world. We have got really accolades around the world for having our flora on-line. One person, who was a writer from Kew published an article on it and said how did they do it? And we weren't people who were just saying what we could do, we

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had done it, and we had documented all of the herbarium specimens, they grew up to be half a million, now it's about 800,000 specimens, all the information was captured. We know what grows where, and where what grows.

**BB:** I'm imagining this, tell me if I'm wrong, it's a shift from the pressed flower image to the digital photography, the information, the place of habitat, the nature of the soil, all this sort of material?

**NM:** Exactly right. At the press of button. But it still wasn't realised by the senior people in CALM, who still thought they had to thumb through old files, to find out what was going to be destroyed by a particular iron ore development or affected by, and I just couldn't believe this, so I went around the country giving talks on how to really use their desktop computer to access what information was available, and that information grew year after year. We got money to document the weed flora of Western Australia, which would be a lot of other people like Greg Keighery had been working on this for years and years, but the specimens had never really been - - the information not mobilised, and here they were being mobilised.

**BB:** What do you think makes a good botanist?

**NM:** I think it's a person who's willing to work with others. That's a hard task, especially in the older days, where people liked to be - - to work individually. I think a taxonomic botanist for example has got to work with people who are geneticists, DNA specialists, and certainly ecologists, and I think a person who's really interested to actually over a broad-based approach. I think that's the future, but there aren't very taxonomists now.

**BB:** Writing skill is important, isn't it? You've done a number of publications. Are there any that you are very proud of, that you feel have made a contribution?

**NM:** I guess there are some. I think - - I tended to write more of the popular articles,

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because I could see this as a way of actually appeasing my will to get over more information to more public than ever, because I found it really galling that for instance development of Perth, in the new suburbs that was going on, in the '80s and '90s, bulldozed everything, and then put gardens in that were foreign plants that need a lot of water. I couldn't believe this. That again was what I was trying to do in the wildflower society, and it succeeded very much because you were preaching to the converted there, but it was very difficult to really get people to understand that there was a whole flora out there, that could actually be utilised and we could really - - needn't use the water we've got. It's been a very painful, slow process, and it wasn't until again mentioning George Lullfitz, the people like that, we were able to develop much more interest and much more reliability in native plants for the garden, that things started to really change.

**BB:** Do we have botanists in our - - almost our pre-colonial past, to whom we owe things? I remember walking with you along the cliffs at Esperance and you describing the French scientific expeditions.

**NM:** Yes.

**BB:** Have those people played a role in our understanding of what we have?

**NM:** I think they did. I guess one thing is important to me is that when you're talking about the French and say the Russian botanist who come here and worked on our flora, why were these people so interested in a flora so far away? And again I think that points to the uniqueness. Okay, it's not the best flora in the world, it's not the richest, but it's pretty close to it. And that diversity, that intrinsic appeal to the flora. I mean you think of the classic kangaroo paw. I always think of this, what a bizarre looking flower it is, and this is the state emblem one, bizarre colour, red and green? And yet when you see a little bird sitting on the - - spinebill sitting on the stem, and pollinating, you think my God, there's that connection there with animals. You can't

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just be a botanist, you've got to be an ornithologist as well to understand these things, and an ecologist, so that was the appreciation I think that I gained, and I hoped to transfer to others, that so many people think our flora is fascinating, why don't we?

**BB:** Well, it does provoke curiosity, doesn't it, because it's not your conventional English rose or your lilac? It's something that is very challenging.

**NM:** That's right. I mean it's bizarre, it's prickly. I'm really - - at the moment I'm trying to document, again, though in a more meaningful way than has been done before, the rise of knowledge about poison plants in Western Australia. It's been a long term interest, and nowadays is aided by the fact you can go to Trove on line and find all the digitised newspapers, what, 111 of them from Western Australia, and go back to 1833, to find out what people were thinking about the cause of the stock losses, and I think that's just such a fascinating thing you can do these days.

**BB:** Have you been commemorated botanically? There are no *Nevillea* anywhere.

**NM:** No *Nevillea*. There are a few species which are named after me. I guess the one I like most is *Drosera marchantii*, but named to appease me, because really this person was actually horned in on some of my research, and I think he knew I was a little bit cross about this. Perhaps I was being a bit of a dog in the manger like CA Gardner was, but he named it after me. And a number of other things were named after me as well. Some lowly lichens, but they're really quite important organisms.

**BB:** Rolling moss doesn't gather stones.

**NM:** Right.

**BB:** Have you retired?

**NM:** No. I resigned nearly 10 years ago, from what was then the department of

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conservation and land management and it changed, I resigned, I think I was just really I could see I wasn't really getting anywhere, and became very unhappy, and started to become unwell thinking about it, so I resigned. I went to the eastern states and I had three weeks holiday, and I'd been to Sydney many, many times, we had a son living that was - -still have a son living there, and I stayed there and I went to every museum and art gallery, even though I had been before, I'd never really had time to do these things. So I really enjoyed myself, and I thought I can't do this for the rest of my life. I'm going to run out of art galleries and museums, so I wrote to the director of Kings Park, and said could he see a role for me as a volunteer, and he wrote back immediately and said yes, come and see me. I wrote on the - - I think on the Monday, he answered on the Tuesday. I had lunch with him on the Thursday and started on the Friday, and I've been there ever since. I go two to three days a week, and I've got all the facilities I want, and interesting, stimulating people and the most fantastic botanic garden as well.

BB: And you still give talks to ...(indistinct)...

NM: I give talks. I'm much involved with the training of their marvellous volunteer programs, the program for master gardeners, the programs for the friends of Kings Park and the guides, the training of guides I'm often involved in giving people ideas of coping with plant taxonomy and coping with names et cetera.

BB: Do you detect an increasing interest in this floral world that you've studied for so long?

NM: I guess it's been a gradual increase, it's, yes, I do. There's much more interest in growing good things, the plant sales at Kings Park, what they are offering now is incredible, and judging by the people who rush in, there's a great deal of interest, and I'm still involved in a few of the wildflower groups, and they're really thriving, so I think that's true that there's been a general increase in interest. I think drought has a

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lot to do with that. I think people are more cognisant of the fact that watering is more difficult. It should be more difficult than it is in many ways, so people are really reverting to things that are - - that look great, if you have a garden in the front verge full of everlastings. I know they're only there for a few months of the year, but the attention it attracts is unbelievable.

**BB:** We are in no doubt now that the climate is changing. What are your thoughts as an experienced botanist about the implications for our biodiversity in south-western Australia?

**NM:** I'm very pessimistic about many things, very pessimistic indeed. There are good reserves, but quite frankly we don't really know how to manage them, because management is just such a huge problem. Fire is such a huge problem. Do we use it as a management tool? Is it overused? Are wildfires just too frequent et cetera? There are lots of questions there, and there are lots of answers that people have. There's a great deal of disparate feelings about the role of fire. And I think - - I suppose disappointed at road verges. They've gone downhill. There used to be fabulous road verges between here and Geraldton. They're still there to some extent, but nowadays people drive at 110 and don't see them anyway. Weeds are another huge problem we've let go. I don't know what the answer is. We need to have - - needed to have learned to live with weeds and before we did, and I think there's chemical pollution, chemical changes. I hate to say it, but I am a bit more pessimistic.

**BB:** Nevertheless, reflecting on your life, would you have had any other career than as a botanist?

**NM:** No. I nearly became a geologist, but I think with the downturn in the interest in mining interest, I think it would be really probably the wrong move to have taken. I think I've been very satisfied on the whole, and I still like plants, and planting a

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garden and keeping a garden means that at least they're in my own back yard and front yard.

BB: What have plants given you in your life do you think?

NM: I think a chance to get into the bush is probably the best thing. There's nothing better than going on a bush walk, whether it's just a Sunday walk in the Darling Range, or even a walk in the - - along the beach looking at the sand dune plants et cetera. And thinking about them, the way they grow. You have to take your hat off to even say my beloved little Droseras, that are tiny little things, that grow in the boiling sand, so hot you could fry an egg, even though they're just all rolled up as little balls for the estivation period, but it's just absolutely wonderful how they survive. And thinking about what's under the soil, how roots are getting water from this dry sand. How on earth the things remain green, when the sand is just bone dry. I think it's fascinating. It'll always fascinate me.

BB: Are there implications for intelligence here, because we think of ourselves as reasonably intelligent animals. But we're learning more about intelligence. Do you think there's a sense in which we haven't recognised that in the other species that inhabit the earth with us?

NM: I think so. But I think it's more of a recognition of the amount of time it's taken for these things to co-evolve and evolve themselves. I guess getting back to the poison plants again. Look at the situation where these plants called Gastrolobium have developed this capacity to release this very, very potent poison at times when they most need it. That is when they're forming buds, new shoots or flowers and seeds, and yet they can do this with very impoverished soils with little fluorine in them, and you think of the fact of the animals that grazed on them, that is the native animals, seem to be immune to the toxic effects. They just co-evolved with them. Now how long did that take? How long does it take for an orchid wasp pollinator pair? And I

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think, I used to think it took 50,000, 100,000 years. Now I think it takes millions of years, and that's really the fascinating thing to me. What we're looking at is not intelligence but the result of 30 to 40 million years plus, of evolution in the south-western corner as an island.

**BB:** And an extraordinary sense of survival and adaptation?

**NM:** Yes. That's it. That's it. I think the - - there's obviously a very - - I've got a great feeling that the diversity we see in the bush is - - there's a selective advantage in it. That is, it pays for there to be a very diverse assemblage of species, because if you've got a species that's got nice edible tubers like an orchid, and there's too much of it, then the animals going to thrive and did that up and eat it. But if there's a real balance, this intrinsic balance between things, and diversity is something that can achieve that balance, very, very easily. And it's really long lasting. Why have we just got such a rich flora that's so old and so stable, well, before - -before man came along.

**BB:** Part of the mystery of all of our existences.

**NM:** That's right.

**BB:** Neville thank you very much for sharing your time with me.

**NM:** Thank you very much Bill.

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