David Suzuki: Oral History Transcription

Name of interviewee(s):

David Suzuki

Reasons why chosen for an oral history: Scientist, environmentalist and natural history television presenter

Name of interviewer: Caroline Underwood

Reasons why interviewer chosen: Longstanding colleague

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1. The early years

DS: I'm David Suzuki. It's October 16th 2008. I'm the host of *The Nature of Things* (1) for the CBC in Canada. I'm an Emeritus Professor in Sustainable Development, Research Institute, at the University of British Colombia and Vancouver. I should say that I'm a trained geneticist.

CU: When did you first become interested in natural history?

DS: What really got me I guess interested in nature was my father, and my first memory of childhood is when I was four and dad was taking me on a camping trip near Vancouver. But really the time that I got most interested in nature was when I was in elementary school and I read a book called *Animal Treasure* (13) by Ivan Terence Sanderson. He wrote two books that I read, *Animal Treasure* and *Caribbean Treasure* (14). He was the head of the St Louis, Missouri, Zoo. What I loved about the books were they were all experiences that he had on collecting expeditions. Now I suspect we wouldn't tolerate some of the techniques that they used back then but he had wonderful hand drawn pictures of the various animals. All of these experiences in the Tropics and collecting these amazing creatures just captured my imagination.

CU: Do you remember the very first wildlife film or series that you saw on television? What was it?

DS: One of the things is that I went away to university in 1954 and there was no television station in London, Ontario, where I grew up so I had never watched TV. When I went away to college in the States of course I was too busy studying to look at TV then in graduate school. The first TV set I ever owned was in 1962 when I got a job as a professor at the University of Alberta. So television was never a part of my upbringing. I'd catch snatches of it if I happened to go by a room and see someone watching TV. So I really don't know a lot of those old shows. There was that one with Marlin Perkins (2) where I remember seeing him wrestling animals in the wild but I never really watched wildlife films.

CU: What about even, say, when you were an adult, is there one film that maybe stands out even later on?

DS: No. Of course, the *Life on Earth* (3) series that's very, very much more contemporary. What David Attenborough did to me was just absolutely mind boggling. To do a survey of life the way the BBC does in such a professional way was for me the big experience.

CU: When did you decide to get involved with wildlife filmmaking or science filmmaking in general? I think if you maybe could just address that. What influenced your decision?

DS: I am not a wildlife filmmaker, I'm just a host, I'm just a pretty face or whatever the hell I am on TV. It was in 1962 when I was just a young assistant professor of genetics at the University of Alberta, and the University had an actual half hour programme on a Sunday morning at 9 o'clock on a community channel called *Your University Speaks* (4). Anybody in the University that was reputed to be able to give a good lecture they invited them to come. The only tool they had was a rear projector so you could show slides. Someone heard that I was a good lecturer and they asked if I would do a show on genetics. So I did a show I think on viruses and they loved it. I think they paid us $15. They asked me to another one and another one and another one, so I ended up doing eight programmes.

Now what was really important was this was at 8 or 9 o'clock in the morning on Sunday. I started coming to campus after I'd done two or three and people would come up and say 'hey, I watched your show, I liked that'. My response was 'what the hell are you doing watching television at 9 o'clock in the morning on Sunday? I couldn't imagine. So that was the first inkling I had, wow, people watch a lot of television and that there was a power of television. Doing those programmes I realised that I didn't cease up on TV and so I filed it away in my mind as this is a potential avenue to educate people about science.

I transferred from UBC to the University of British Columbia in a year. It was 40^{o} below for a month in Edmonton and although I loved the university I decided to leave. I got to UBC and most of the students in my class were Premeds, so they'd ask me questions about cloning and genetic engineering and all that stuff. To my amazement, although I'd had a very good liberal arts education I didn't know any of this stuff. So I started to read and to my shock and horror I discovered that genetics, which had been rediscovered in 1900, had been really responsible for some of the most heinous things in human history.

The geneticists, because they were so infatuated, intoxicated with their discoveries in the early part of the 20th century, began to proclaim genes determined everything. They determined all of our human behaviour, alcoholism and criminality and laziness. These are all things that people began to say this is genetic and a whole of area of science, **eugenics**, grew up, this is human genetics and people began to say we've got to affect the human breeding because we're getting bad genes building up.

Then as I read further I realised that it had been the grand claims of geneticists that ultimately had led to Japanese-Canadians and Japanese-Americans being incarcerated during the war. I was a third generation Canadian but because I was Japanese they deprived us of all rights in Canada, put us into a concentration camp and kicked us out of the province at the end of the war. The Holocaust had been created because geneticists in Germany had claimed that they could get rid of bad genes and, of course, they sterilised and extrapolated millions of gypsies, homosexuals and Jews. It had been the grand claims of genetics that had

been responsible for the Holocaust.

Genetics claims had led to immigration restrictions in the United States. There were states that prevent inter-racial marriages because geneticists said that leads to disharmonious combinations when you breed isolated races.

So all this bogus stuff had been promulgated or put forth by geneticists and it led to these terrible things in human history, and that for me was a real revelation. I hadn't been taught that in my university education. So basically what I had been taught in university was an expurgated version of genetics. I realised that if we're going to avoid these terrible consequences of science, one of the ways to do that is to translate what's going on in science, so that the public has a clear understanding of the discoveries and the potential for both good and bad. That's ultimately what led me to use my experience at Alberta with this television station.

When I got to UBC I proposed an idea, 'why don't we do a show on science?' and actual Nolton Nash at that time was the head of, I don't know what category arts, arts, science or whatever. Nolton Nash gave us permission to do show out of Vancouver that he actually named *Suzuki on Science* (5). The interesting thing was when I did *Suzuki on Science*, which I think started in 69, I had been teaching at Berkeley in 64 and when I came back to Vancouver I came back with hair down to my shoulders and granny glasses. I was a hippy. So that was part of the persona of *Suzuki on Science* in television. The scientific community hated it. They hated a hippy being on television trying to explain science but that was my first national show.

CU: You actually went on from using your background in genetics, your understanding of that particular branch of science, to a much broader, kind of informed criticism of all kinds of science including what has now become the environmental movement. Using your very good understanding of science to really push politicians and policymakers to look at the decisions that they're making about the natural world.

DS**:** All that I attribute to my great hero who was Rachel Carson. In 1962 when I was starting my career in Alberta, I had gone to the school in the States and I was a hotshot. We knew about DNA and all that stuff and I was determined to make my reputation as a geneticist. I started my career as a professor and out comes *Silent Spring* (15) by Rachel Carson in 1962. As I read the book it was as if the message had been written for me and the message was: you scientists are clever, yes, you can make **DDT** that kills insects but you forget the lab is not the real world. The lab is this grotesque simplification of the real world, it's an artefact. You put a plant in some soil and an insect and spray chemicals and show, what do you know, it kills bugs but the real world is a far more complex thing.

So at that time I was the ultimate reductionist. I was interested in genes and how they controlled chromosome behaviour. We used to refer to fruit flies which I studied as flying bags of chromosomes. We didn't care about a fruit fly as a whole organism or its habitat or its environment, we were just focused on the fruit fly. I had thought what we do in the lab is study a miniature part of the real world. So if you study a little bit of this and a little bit of that then you add it all together and you get a picture of the whole world.

What Rachel Carson said is what you're studying is an artefact. You're studying something in the lab with the temperature and light and humidity and all of that is controlled. You've got a grotesque simplification of a system but what you learn in the lab is of very little help predicting what happens out in the real world. You can show that DDT kills bugs in a test tube. You spray out in the real world and guess what, it spreads through the whole system and it ends up affecting fish and birds and human beings, and that to me was just the biggest eye opener. The tremendous restriction of our ability to predict from the basis of what we study in the lab. This is the fundamental problem with genetic engineering. Geneticists think that you can take a gene out of a fish and stick it into a plant, like a strawberry plant, and that gene is going to function. They don't understand that you remove a gene from its context in a fish so it produces antifreeze and stick it into a plant, you've changed the whole context in which that gene finds itself. You simply cannot anticipate what the consequences of that manipulation would be.

That's what Rachel Carson taught me and because of Rachel Carson I began to see not just the bigger picture that genetics played in our lives but that the environment became something that I had to look at, and that what we were doing in our manipulations in the lab had reverberations that went way beyond that we couldn't understand. With that insight then, because of Rachel Carson, I was swept up in Vancouver in a number of environmental issues, not as a geneticist but just as an interested scientist. So I was swept up in the issues of drilling for oil offshore and we stopped it. There was a major dam to be built at (Sight Sea) on the Peace River and we stopped it.

One early thing I got involved in was the American proposal to test underground nuclear weapons in Amchitka in the Aleutian Islands, and a lot of us were afraid it would liberate radioactive material and might set off earthquakes and tsunamis. Well, Americans were no different then they are now. They didn't give a shit what Canadians felt and they blew it up anyway but a lot of people don't know that that led to Greenpeace being formed in Vancouver. Greenpeace was a made in Vancouver organisation as a result of the protest against Amchitka. Because I lived in DC I got caught up in opposing clear cut logging and pollution from pulp mills.

So I was dragged by virtue of living in Vancouver, although I was still a practising geneticist, into these other areas because Rachel Carson really set off the modern environmental movement.

2. Career development

CU: By and large in those early days of television in the 60s and 70s, programmes were mostly just presenting science as if it was a fete accompli, that there was no criticism. Scientists knew what they were doing, after all they were scientists. Now The Nature of Things and your role in it has always been a somewhat more critical thing but I don't know that necessarily everybody knows that. The Nature of Things has always taken a slightly different tack when exploring scientific subjects.

DS**:** When I did Suzuki on Science, and it lasted for two years, I finally quit because we had a budget of $500 a show or something ridiculous. Those shows took both the positive and negative aspects of science which is another reason why a lot of scientists objected to it. A lot of scientists go on television because they want to basically sell how great the science is. They do not like criticism. They do not like the possibility that this could be used in negative ways. So Suzuki on Science came under a lot of fire, not only because I was a hippy but because we looked at other aspects.

I quit Suzuki on Science, went back to the lab. It was Jim Murray, it's an interesting story and it's too bad Jim can't tell this story. CBC took a chance. They wanted to have their great series that was going to make a blockbuster series and it was called *The White Oaks of Jalna* (6). They put a lot of money into it and it was a total failure. They took a huge drubbing from the critics for wasting all this money on a failed series. To try to resurrect themselves they decided to put their money on another blockbuster and that was Pierre Berton's *The National Dream* (7) about the building of the railroad across Canada. In order to ensure that the series was a success they chose to be the executive producer one of their most reliable producers and that was Jim Murray.

Jim Murray had been with *The Nature of Things*. After the first year he came on as a producer and then quickly rose to become the executive producers of *The Nature of Things* which started in 1960 as a half hour programme. For a couple of years they had two physicists from the University of Toronto, Hume and Ivey, who hosted basically a *Nature of Things* series about physics which was very popular and they were terrific on camera. Then it became a half hour programme about many different subjects without a host.

Jim Murray was seconded from the *Nature of Things* to produce *The National Dream* which was a huge success. So Jim, basically because of that, he could have had whatever he wanted. Instead he said 'I want

to go back to science' which in terms of a career choice was totally mystifying to most people because they just see science as a way to climb up the ladder to news and current affairs or these other sexy things. But Jim is devoted to science and natural history.

But meanwhile his partner, Nancy Archibald, had been put as the executive producer of *The Nature of Things*, and when he came back he said I want as a reward for my success with *The National Dream* a new series and it was called *Science Magazine* (8). It was to be a half hour programme with anywhere from two to five items in a half hour. Very late, as he began to research and produce items he realised we need a host, it's not like *The Nature of Things*, you've got disparate subjects that might be in technology here and medicine here. We need a host to tie these all together and that's when he began a search to find a host. He sent Richard Longley across the country to interview scientists and he found me, and asked me then to be the host of *Science Magazine*.

The way it ran was that *The Nature of Things* ran for half a season and in that same time slot the *Science Magazine* took over for the rest of the year. What was interesting is that *Science Magazine* instantly attracted 50% higher audience than *The Nature of Things*. It was a much younger audience because kids like the short items and they like the zippy, and they don't care about the context or anything. They like the kind of fast pace of the show.

Before the series was even ended Nolton Nash had decided to cancel the series so we knew halfway through the season that *Science Magazine* was only a one season show. On the last show of the run I said 'well, thank you for joining us, we've had a terrific time and this is all for the *Science Magazine*, goodbye'. Well, the outrage that came in from the audience was so great that within a few weeks Nolton Nash had reversed his decision and put us back on. *Science Magazine* ran for five years.

Meanwhile the second series of *Science Magazine,* I had begun as a host of a very successful radio series called *Quirks & Quarks* (9) which was an hour show on radio about all aspects of science. I have to admit I loved radio. Ironically I ended up leaving radio to devote full-time to television because television had a much bigger reach. But in recent years with the proliferation of options for viewers, our audiences have been falling like this. Radio audiences, in fact, have now surpassed what we get on *The Nature of Things.* I just did a show called *The Current* (10) for an hour and a half, their audience is up around 900,000 to a million. We don't get that on *The Nature of Things* anymore.

After five years we decided to fuse *The Nature of Things* and *Science Magazine*, make it a one hour programme, *The Nature of Things with David Suzuki*. So that's how I came into that realm.

My really great teacher was Jim Murray. Jim was an avid birder and because of his love of birds and his very close relationship with John Livingstone, who was really one of the early gurus of *The Nature of Things*.

CU: He was executive producer at one point.

DS: Right, but I don't know whether he was there right at the beginning. Lister Sinclair was at the beginning.

CU: I think that's when John came in.

DS: But John certainly had a huge impact on Jim Murray and Nancy Archibald, and basically was the strong, philosophical basis of the series. I can remember in my early ears and it had always been my contention was at the centre of things. We were the cause of the problems and we had to be part of the solution but Jim and John started with a very different position. So mine was a very anthropocentric view, humans were at the centre of everything. They started with a bio-centric view which is that you've got to look at the whole web of living things and that humans were a part of that. Ultimately our role was to be dependent on the rest of the system. Well, of course, I totally agree with that.

It was through long arguments with Jim that I understood this is a fundamentally different position to take a bio-centric point of view and it's one that enthused certainly my activities and thinking after.

CU: I can remember in 82 when I first came and we were working on Planet Earth. You still had your anthropocentric view and I remember sitting around and having those big production meetings.

DS: Yes. I remember a time when Livingstone and I had a conversation. We didn't have many conversations because it got to be just too heated. But I was involved in an anti-nuclear activity and I said, look, you ought to get involved in this and he said why? He said 'if we want to blow them up and kill ourselves all the better' and I just couldn't buy that kind of misanthropic. There was a very strong edge of bitterness I felt on the part of John, that humans had been so destructive the sooner we got out of the picture the better for the other creatures, and to this day I can't take that position. But certainly the bio-centric view's got to be the way that we do things and I thank John Livingstone and Jim for that part.

CU: Maybe if we could go back to one of the early wildlife films that you worked on. One that I remember sticking in my mind was the elephant seal film (11) that you did with Amanda. It wasn't the very first one that you did but I think it was a memorable one.

DS: It certainly was. The film that I did with Amanda McConnell doing the research and writing. I've forgotten who the producer was of that show but it was a remarkable story. Elephant seals were hunted to virtual extinction. One of the great stories in that was that they were thought to be extinct when a collecting group from the Smithsonian Institution was out looking for things, and they came on a herd of elephant seals. They thought they were extinct and they slaughtered every one of them to take back to Washington to put on display. You think of that today, it would be inconceivable.

But the thing about cameramen is that they're so focused on what they're doing that they're impervious to what else is going on around you. This was immense male elephant seal sleeping on the beach and there were a lot of other females and pups all around. So I crouched down in front of the seal in typical David Attenborough style and I did my stand-up. Then Rudi said 'okay, that's great, now, look, would you get a little closer, you're a bit too far' and he backed me up and then I did it again. He did this four times. Each time he'd say that was great, we've got it in the can, just back up a little bit more. By the fifth time I could see that Rudi was looking through the eyepiece but his other eye kept opening like this and I could see him looking. I knew something was going on and I turned around and this elephant seal had risen up behind me, and I just blew my lines and jumped out of there. But Rudi would have had me giving my stand-up and let the thing come at me.

It was one of those time when you realise you've got to look out for yourself as well as do what he tells you.

CU: I'm just thinking that there was another story, actually it was for Planet for the Taking (12). *It was early days actually for a very complex series of on cameras for you and I think you were stony broke and it was with the chimpanzee.*

DS: That was a great shot and the idea was that we're going to talk about our evolutionary roots and who our ancestors were. We had a chimpanzee sitting on a stool right next to me but the camera's focused on my face. The idea was I would finish and the camera would pull out and we'd see the chimp sitting next to me, and I'd complete my stand-up. Well, right in the middle of my single shot stand-up this arm came in from out of frame into frame and grabbed my chin like this. It was a beautiful opportunity for us then to widen out but I blew my line. It was so shocking to me but it was a great shot.

3. Environmental themes and concerns

CU: Obviously it was a bit scary with the elephant seal. Most people I think would probably be very spooked by some of the things that you did maybe with Leo Wilson and the insects and other things like that. But I know you have a great fascination for those creepy crawly things.

DS: Well, to me it's insects that hold the world together and nothing was more shocking and frightening to me than to hear about colony collapse disorder, the sudden disappearance of honey bees. That sent a bolt of fear through me because if honey bees disappear, if the pollinators disappear, life on earth will change in ways we can't imagine, and we certainly as a top predator will not survive that. Extinction through the disappearance of pollinators will just totally upset the planet's ecosystems but we take those things for granted.

One of my great concerns is the way we've demonised a lot of the creepy crawlies. I remember I was in a house once and a boy came running in to show his mum his jar. There may have been a spider and a couple of beetles in there and he was so excited. Right away the mother's response was take that out of here, don't bring that in the house and you could see the shock in the kid's face. Suddenly what was to him so exciting and fascinating and treasure had been made into something and I'm sure he was frightened. But what you do is you teach children to think that these amazing creatures are dirty, disgusting or dangerous. I think that's one of the fundamental crises that we face today.

We have a generation of children who spend the least amount of time outside of any generation in human history. We've made the outdoors a kind of forbidding place. Our cities are not places where children can go out and play. I remember when I was a boy in the 1950s in London, Ontario, 5.30, 6 o'clock back doors would open and mums and dads would come out 'Johnny, Mary,', and we were all out there playing in the ditches, in the parks, in the ponds. They weren't worried that we were going to encounter a pervert or get hit by a speeding car. The city has become a very unfriendly place for children and we don't have the opportunity then for kids to go out and experience those things.

CU: Do you think that television can play some kind of role?

DS: I really am torn about that because on the one hand I remember the show that we did together about the island school there, and that was a really important programme that I hoped would inspire all of Canada to see that kids were required to spend a week out there and having a nature experience. Television is very good at getting inspiring stories like that across. I'll tell you the problem though.

I've always been very concerned about virtual reality. People think it's wonderful but I think one of the problems is that virtual reality is better than reality. You can have the kinkiest sex and not get AIDS or get caught by your partner. You can have a gunfight and lose and live to fight a gunfight again or you can be in a race and crash your car and walk away, and yet it's got all of the heart thumping experience of the real thing but none of the risks. I worry that people get caught up in that kind of unreal world.

I always thought that *The Nature of Things* was different. We're going to bring nature and get people to love nature but I realised that what we do is we create a virtual reality too. I mean if we want to do an hour's show in the Arctic the producer or I don't go up there for months and months, we send a cameraman up there and the cameraman sits in a blind and spends months and months trying to get the perfect shot: the mother polar bear emerging from her den and cubs following her out and catching seals. It takes a long time to get those shots. Then they all come back to the editing room and you cut together one sensational shot after another. Then when the viewer sees it, well, my god, who doesn't want to go to the Arctic, everything's happening: bears are catching seals and seals are catching cod and all this stuff.

Well, of course, what we've done is we've edited out the most fundamental thing that nature needs. Nature needs time. Nature needs time to unfold her secrets, nature needs time to restore herself to do all of the things that nature does but we have no room for time on television. Increasingly we're competing with more and more channels and more and more outlets on the internet, and we've got to speed everything up so we

put nature on steroids. The sense is, well, we can jack up the rate at which nature does things. We want fish, we want to take more and more fish, well, we've got to breed up super fish that will grow faster and bigger. We want trees, we're going to put trees on hormones and get them to shoot up so that we can harvest them in 50 years.

We don't understand that the most important ingredient in nature is time and television is very, very reluctant to give that time.

4. Influences and the future

CU: Can you tell us about any characters you met when you were starting out?

DS**:** Well, there are two people I was most impressed with. One had a profound influence on my life. The first one was a scientist, a biologist named Tom Rankin and he chose to do a very exhaustive study of the interaction of populations, focusing primarily on stickleback, in a tiny lake in the Queen Charlotte Islands off the north coast of British Columbia. They used to call him Stickleback Tom because he constructed a really makeshift hut up in an area where it rains a lot, the climate is pretty severe. For years and years he lived in this shack studying all of the factors that went into maintaining that population of sticklebacks. He was looking at ones that had a large number of spines versus ones that had smaller numbers of spines, and he looked at the predators. Most people would go up and they'd fly in for the summer and they'd study for three months and then they go out. But living there he found that these scientists in the past had missed the fact that whole groups of birds come into that lake at different times through the year, and that each of them took a part of the population of those sticklebacks.

Then there were fish in the lake that he began to sample. Usually people are studying stickleback but they're not studying the predators. Then there were mammals that came in. What he did after years and years was to give us an understanding of the complexity of that simple little lake, and the factors that determined the stability of the population of those sticklebacks. One of the most amazing things to me was that no predator he found of any prey ever took more than 5% of its prey. Humans come along and we think we can take 95% of the salmon, they overproduce. They destroy salmon spawning beds by putting in too many eggs. This is the whole human justification for our harvesting. But if you think of Tom's work, no predator takes more than 5% of its prey. We come in and clear cut forests without a second thought. We ought to pay much more attention to the kind of work that he's done.

The other person that had a huge impact and it was for a programme we were doing on the conflict between logging and the environmentalists who wanted the logging to stop in Queen Charlotte Island. I interviewed a man who was leading the fight against logging, his name was (Gujo). I knew that many of the loggers were Haida, that many of the non-Haida would come into the Haida communities and shop in their stores, and they'd add income to the community. So I said, Gujo, why are you fighting against logging, economically it's good for your community, so what difference does it make whether those trees are gone? He said, 'yes, if they cut the trees down we'll still be here but then we'll be like everybody else'. At the time he said that it went right over my head, I was thinking what's the next question to ask him. When I looked at the rushes in Vancouver I realised that's really a weird thing to say.

As I reflected on it, I realised he had opened a window on a fundamentally different way of looking. He was saying that to be Haida meant a fundamental connection with the land. Those trees were a part of what made him Haida. That the fish and the birds and the air and the water, all of that is what makes Haida different and special, and when you destroy those things you destroy a huge part of what you are. It sounds strange in our society, we cut and move on, that's the way we behave. But his sense of connectedness and very identify being created by what was around him has shaped the way that I look at the world. Every one of us is a product of the air, the water, the soil, and the other creatures in the place that we live. If we use those things as a trashcan we become the ultimate trashcan because we're dependent on all of these things.

So I've always been grateful to Gujo and that just tiny interview that I did with him. He became a very, very good friend and a teacher to me.

CU: If you could make any wildlife film that you wanted to make or you could make, budgets, time, none of that was an issue, what would you make?

DS: Well, there are number of things that I've thought about. I would love to do the definitive programme about soil. Soil is not just dirt. We don't think of it because it's underfoot. Soil is a complex community, a community of organisms. I think of soil as a living organism. They communicate and they interact in ways that we don't even understand but the reality is we're totally ignorant of what soil is. If you take a little teaspoon of soil the chances are you will have thousands of species of micro organisms that we've never even identified. If you took a teaspoon of soil two miles away you'd get thousands of species we haven't identified and many of them not similar to the one in that teaspoon here. We don't know anything about what's underfoot and yet we're talking about pumping millions and millions of tons of carbon dioxide into the soil. We don't have an idea.

I would love to do a show. I wrote a book called *Tree* (16) and it was all about one tree that happens to be on my property on an island, and it's a 400 year old Douglas Fir that's got a strange shape. It comes sideways out of a bank and then curves up and then goes up straight up. It's a lovely tree because kids can climb it and we hang things from it. One day I was sitting on the beach looking at that tree thinking what the hell is a tree doing growing out in such a way. Of course, the minute you think about it you realise that it was growing like that and the bank must have slumped down, so it began to grow up again and then it slumped down further.

So I started thinking about that tree. When a seed lands on the ground, it can't say 'this is a crummy spot, I'm going to move somewhere else'. It's stuck. Once it sends down that first root it's got to make its' entire living there and all kinds of things want to eat it. It can't fight off anything, it can't hide. It's got to take whatever is coming at it and you start thinking, my god, this 400 year old tree or any tree is a miracle that it's been able to survive. How has it done that?

Well, I wrote this book. It takes us right back to the Big Bang, to the actual moment of creation and it just links us all through. Trees communicate with each other, their roots touch each other, they exchange goods. When they're drilled by a pest trees begin to produce a host of insecticides. Those insecticides are volatile, they evaporate into the air. Other trees nearby pick it up and they go, oh my god, Jack's being attacked and they start pumping out their own. There are things going on in that one organism that are really amazing, and it shows you also that that tree just connects us to the world.

I think the biggest message that we're missing today in the way that we live is that our home is the biosphere, that's the zone of air, water and land where life exists. Carl Sagan used to tell us that if you shrank the earth to the size of a basketball the biosphere would be thinner than a layer of plastic wrap and that's it, that's everything. In that layer everything's connected to everything else. That's what Rachel Carson taught us in *Silent Spring* and we are a huge part of that biosphere now. We're the most numerous mammal on the planet but armed with technology and with a consumptive appetite that's endless and a global economy, we are now bumping in to all kinds of limits within that tiny layer of Saran Wrap. We've got to understand how we're dependent on everything else in that layer and everything we do has repercussions within that. Therefore everything we do has responsibilities and we've lost that sense of responsibility.

CU: If somebody is just starting out and wants to get into the business, what would be your advice as a wildlife filmmaker?

DS: Because I never set out to be a wildlife filmmaker I just haven't paid attention to what it takes to get a wildlife film on the air. I've been very privileged and fortunate. I've been living with the CBC and all of the

structure that goes to making films. But I think that there was never time when we needed more programmes about the wonderful diversity of life around us. I think though that what's needed is a greater sense of urgency. I think it's a luxury to think that we can just do a wonderful film on birds of paradise in Papua New Guinea and get people to love nature that way. We don't have time now.

It's wonderful that we can record and archive these creatures but most of the wonderful creatures that we're seeing will be extinct by the end of this century, and we ought to be thinking about that a lot. Thinking about the loss of those creatures but also what that means to us. When scientists, as they have recently, tell us 20% of bird species could be gone by x number of years. Andrew Weaver at the University of Victoria is saying if we carry on loading the atmosphere with carbon as we are now, 80% of mammals will be extinct by the end of this century. Well, my god, whether he's off by a percentage or not that is scary as hell. I don't think we can do natural history films if we don't come down and tell people, not only that this is urgent, that this glorious creature will be threatened because we're going to be busy destroying its habitat, but we've also got to give people a sense of what can be done. We can't just end up saying, sorry folks, it's too late, this guy is out of here.

But I think this is what I would advise young filmmakers. Your message is not just that nature is wonderful, although that's an important part of it, but that there is an urgent crisis now, that humans threaten all of life on earth and that we've got to take the steps we need to pull back. If for no other reason, for our own self-preservation. We're the highest predator in the food chain. As we knock bits and pieces out of that chain what do we think's going to happen to us? We are the most vulnerable of anything I think.

CU: Well, I think that's a great note to end on.

People, films and organisations mentioned

Amanda McConnell

Andrew Weaver

David Attenborough

Gujo

Patterson Hume

Donald Ivey

Jim Murray

John Livingstone

Lister Sinclaire

Marlin Perkins

Nancy Archibald

Nolton Nash

Pierre Berton

Rachel Carson

Richard Longley

Rudi

Tom Rankin

BBC

Greenpeace

Smithsonian Institution

St Louis Missouri Zoo

University of British Colombia and Vancouver

University of Toronto

University of Victoria

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Glossary

Eugenics: The study of or belief in improving the qualities of the human species

Dichlorodiphenyltrichloroethane (DDT): Synthetic pesticide