



NatureHood and Health

December 11th, 2018

Join long time environmental advocates, researchers and a horticulturist as they share their experiences and thoughts on what we need to do to protect life as we now know it on the planet. This was a wide-ranging discussion on connecting the dots between nature and health. We wanted to explore leading a virtual conversation between four friends about their work on the environment for the environment. We also want to see whether or not an informal one-off e-conversation would be interesting to e-audiences.

Paul Allison, Supervisor of gardens and grounds at Royal Roads University.

Dr. Ann Dale, Professor, School of Environment and Sustainability, Royal Roads University, Principal Investigator, [Meeting the Climate Change Challenge \(MC³\)](#)

Dr. Leslie King, Program Head, Master and Bachelor of Arts and Master and Bachelor of Science in Environmental Practice programs, Royal Roads University

Bob Peart, Biologist, educator, and Board Chair of Nature Canada

Ann Dale

Tis a snowy wintery day here in the East, thanks for joining me today. This follows on a conversation we had over lunch at Royal Roads University in October when we talked about what was important to us about the environment and our work trying to make a difference. We come from different backgrounds—two pointy headed academics, a wonderful gardener and one of BC's longstanding environmental activists. This is an informal conversation, and although I will be moderating a little, I also want to participate as one of you. How about I start off?

When my beloved son was little, he told me not to worry about him being an only child as all the trees were his friends. That about sums it up, for as well, I never understood why I had to go inside a church to talk to god, when I believed they were all around me outside, in the lake, in the sun, the moon and the stars. I must admit; however, I am getting rather depressed, especially with the latest IPCC report saying we basically have 12 years to get real about climate action, or we face irreversible effects. And the recent warning about biodiversity loss are even more alarming.

Rather than talking about the evidence, which is now overwhelming, and if you are interested, please go to [our curated biodiversity resource library](#)

Bob Peart

I spent my youth either running around outside or inside reading (mostly books about nature or outdoor adventure.) As a result, I am a naturalist and I still love being outside. My mum liked birds and my dad fussed in the garden, so I guess it came from them. I also had an older cousin who was a biologist and I thought that was cool. So, I studied biology and education and have been doing this work all my life.

If people on this dialogue today want evidence, they can also access the research library of the Child and Nature Network where they have posted over 300 published refereed papers on the nature–health link and the value of playing in the outdoors at: <https://www.childrenandnature.org/>

Leslie King

PS I guess we are early — I'll calm down and sip my coffee! L

Ann Dale

We are early, but who cares? What's the weather like there?

Leslie King

Thanks Ann, Great to talk to you!! What an interesting idea and thanks very much for the implementation! Cheers and it is raining hard here!!

Good morning Bob — where did you grow up? Apart from in Nature! It's pouring here, Ann!

Bob Peart

I grew up in south–western Ontario, just north of Lake Erie. Went to school at Uof Guelph and when graduated, I lived in Ottawa for 4 years, then SW Saskatchewan for 4 years, then moved to BC in 1980.

Paul Allison

Good morning everyone. Paul here in a very wet Victoria enjoying what they call a 'Pineapple Express'—a warm but heavy rain day.

Leslie King

Good morning Paul — aha Pineapple express — love that expression!

Ann Dale

I suspect many of us love being outdoors, but I wonder where that comes from. In my family, there are three of us, and two of us love being outdoors, but one of us doesn't. It's interesting, isn't it? Regardless, I think we need to think about how to instill that love of outdoors in everyone?

Paul Allison

Ann your question, "I think we need to think about how to instill that love of outdoors in everyone"?, reminded me of the British naturalist [David Attenborough talking with President Obama](#).

David says that all children are born with a love of the outdoors "and then they then unlearn it".

Leslie King

Perhaps first we should comment on the name of this e-Dialogue — hmm when I saw the word NatureHood, I immediately thought of Nature in the "hood" which resonates with my interest in preserving and promoting urban biodiversity as both mitigation and adaptation to climate change...and slowing the loss of global biodiversity!

Bob Peart

Yes Leslie. [NatureHood](#), that is the whole idea, nature in your neighbourhood....nature in your hood. Just explore around where you live, you don't necessarily need to go to a park....

Bob Peart

Ann, is the one who doesn't like the outdoors the oldest? Just curious, because there is often a connection between liking the outdoors and birth order.

Ann Dale

Interesting question, Bob. It is the middle child. I wonder if there is a way to bring the outdoors in? I have been arguing for years BC Ferries should have attached underwater cameras, so people could see the hidden life they are passing over on screens? Welcome, Paul.

Leslie King

Just to clarify that I am not the one who doesn't like the outdoors (I suspect it is none of us!). I'll add my connection with the outdoors both past and present!

I wrote this little blurb for Nature Canada's Women for Nature and it sums up my passion for the natural world and my source of hope:

“Growing up in British Columbia, I was constantly in a state of nature, getting lost in or running away to a ravine behind my grandparent’s house, fishing with my father, holidays on the ocean, wading into lakes or forests to find First Nation’s graves, scrambling up rocks, climbing mountains, skiing, sailing and even experiencing human shaped nature, gardening with my parents on the edge of the sea. The natural world provided beauty, recreation, solace and inspiration as well as the necessities of life. The diversity of life, the birds and beasts in the forests, on the ocean, and even in the vacant lots and railroad cuts of Vancouver were a source of joy, awe, wonder, and humility. Nature was truly my playground and my school where I learned self-confidence and self-sufficiency as well as the arts of survival and happiness. I learned very early that nature heals all ills and is a never-ending source of peace, creativity, curiosity and education. At University, I studied the natural world in zoology, botany, literature and art. In graduate school, I learned about the increasing threats to biodiversity and what that means to humans. So, I learned sadness and loss as well as hope and a calling to educate young people and adults about the lessons, precious nature and vulnerability of the natural world. I wandered the world to understand its nature. Work in Africa and the Arctic reinforced the truth of how dependent humanity is on the natural world physically as well as culturally. Yet I was there also faced with the tragedy of increasing destruction of the natural world even as it becomes more and more precious and scarce. I have dedicated my personal and professional life and career to teaching, research and conservation of the natural world, biodiversity and the richness of the human relationship with nature. I am here today because I hope that, while the youth of today will never experience the natural world as I did, growing up in BC, they can still develop a new and healthy relationship with nature in Canada and the world and will find the joy it has given me my entire life, and satisfaction in the struggle to preserve it.”

Bob Peart

Ann, bring the outdoors in? Vicarious nature? I am more in favour of getting people outside and off their screens. Screens can be adjunct perhaps, but can't substitute for the real thing.

There is also this recent report from Nature Canada.

[Screen Time vs Green Time. The health impacts of too much screen time and not being outside](#)

Ann Dale

Okay, guys, how do we encourage people to re-learn it? One way I think is to bring the indoors out. For example, why can't art galleries display some of their collections on the outside of buildings? There is another project, I think it is called [Photo Ark](#), where a wildlife photographer is showing magnificent pictures on the exteriors of buildings. Bob has raised a critical point—the amount of screen time people are now spending?

Leslie King

Ah a very Blakian notion — "trailing streams of glory"!! I like it — born in a state of innocence (and bliss)!

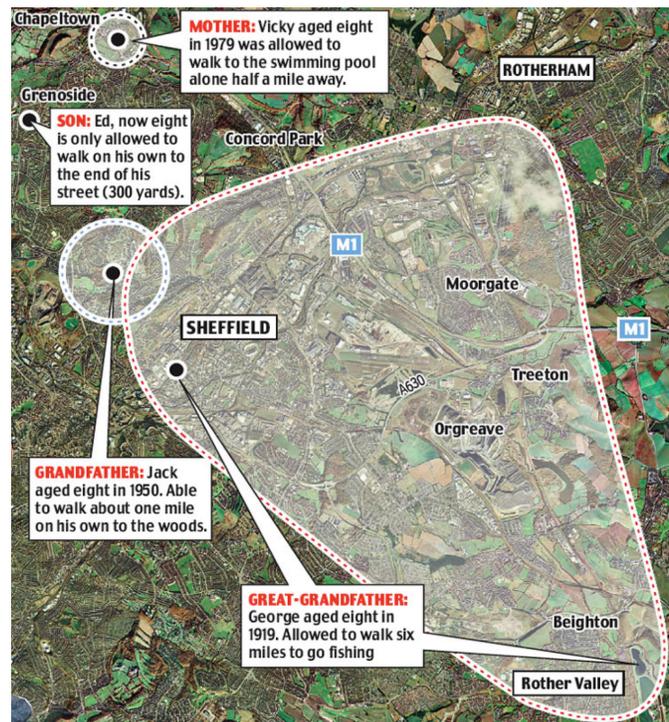
Bob Peart

The change in behaviour seemed to take place around the mid-90's when the wireless world, the screen world emerged. Until that time about 70% of children roamed and played in the outdoors. They left for hours, often ventured a few miles from home and returned home for supper. Now 5-8% of children play outside and when they do so it is for 30-40 minutes and often only a block or so from their house. Completely different behaviour. Behaviour that doesn't engage the senses. And there is increasing evidence that as a youth, not being outside bringing in all 'those senses' harms the formation of the brain.

Paul Allison

Like everyone here I spent a great deal of my childhood in nature. Growing up in rural England, one day I was near a local reservoir and suddenly my eyes were drawn to pair of dancing great crested grebes with aquatic weeds shaking their heads. These unusual bird behaviors lead me to ask my parents to buy my first bird id book and document in sketches this behavior. This moment lead to my love of nature.

So, the plants and animals became my neighbours! So, this brings me to a point I want to make with regards to children today and the roaming effect. How children are not getting into the Naturehood as much as past generations.



This is well illustrated [in an article in the Daily Mail by David Derbyshire](#) and is well illustrated in this map.

Leslie King

Love that map!! I was allowed (or perhaps not allowed — never asked permission, but tolerated — to go everywhere by myself, except the east end of Vancouver) — more danger from people than from nature!

Ann Dale

Bob and Paul, those are startling facts, imagine being so prescribed. In my undergraduate child psychology program, we were taught that if you put little children on a roof without a fence, they would play in a much more limited space than if there was a fence delimiting the boundaries. It would seem to me that we need to decide what are the imperatives for human health and create some boundaries? And there are key cultural variables as well.

Leslie King

I was asked this question by a student in Seattle last week and I said — get them outside! She said she already did that and what else could she do? I suggested that she get their teachers outside and then I suggested that she get their parents outside!!

Mu Cure—all!

Bob Peart

And what did she do when she had them outside...did she excite them and get them filled with the joy of nature??

The evidence is strong that intergenerational time in the outdoors is really good: grandparents with their grandkids is especially strong. Also, older youth with younger children leads to a good experience.

And yes Leslie, it should be a family experience.

Ann Dale

Paul, can you tell me about your work in healing gardens, and what role they can play?

Paul Allison

Like many people we don't always do what we know is good for us. Ann, you mentioned your childhood experience of being outdoors and its effects on you mind,

body, spirit. I would say that for me when the cultural depression and anxiety around us affects us we need to go back to the tried and tested of reconnecting to nature and outside. If you want proof of its efficacy a website sponsored by Alberta Parks and Recreation titled [Benefits Hub](#) is an excellent resource.

Leslie King

That's a great website Paul, but by clicking on it, I kicked myself out of the dialogue. I am back now.

Paul Allison

Perhaps the most succinct and poetic statement I know of comes from Jim Rouse, the developer of Columbia, Maryland in the 1960s. He told his development team that he wanted them to “build me a garden to grow people in.” Now that is something I hope we could all relate to: our purpose in life — the business we are in or should be in — is to “grow” people, not the economy, to maximize human development and the achievement of human potential, and to do so in a way that is ecologically and socially sustainable.

Leslie King

That Rouse quote is wonderful as is your comment — many thanks Paul!

Paul Allison

Let me share an example of a healing garden that I designed at the Royal Jubilee Hospital here in Victoria, BC. The Royal Jubilee offers critical-care, surgery, diagnostics, emergency facilities and other patient programs. It has a particular focus on cardiac medicine and has over 500 patient beds. It is the major hospital on Vancouver Island. Here is an article on the garden: <https://concretegarden.ca/content/garden-journal/tilling-the-soul/>

Ann Dale

You are all giving lots of resources, thanks, we will post them on our website later if people want to explore further.

Bob Peart

It is becoming increasingly evident that we have become an urban species; as a result, our indifference to and the lack of emotional connection with nature is an increasing problem of modern society.

The statistics are disturbing:

- Over 20% of children are obese.
- The literature links ADHD and bullying with the lack of unstructured play.
- Asthma and the number of children on drugs/medicine are increasing annually, largely because our immune systems are breaking down ...and why are immune systems breaking down — because we aren't splashing in mud puddles, breathing dust, patting animals, tasting flowers, etc...
- Most children and youth are unable to name the 5 common birds in their backyard... nature has become a vicarious experience on Discovery Channel...
- It is not uncommon for today's youth to spend up to 6 hours a day in front of a screen...an hour of that sending and receiving texts and checking Facebook.

Leslie King

Shocking figures, Bob. We really have to educate people, educate the heart as well as the mind, and get those kids outside!! This is a parental and educator responsibility.

Paul Allison

I believe it not a lack of information, it's a lack of integration. The type, quality and context of 'greenspace' should be considered in the assessment of relationships between greenspace and human health and wellbeing. Opportunities exist to further integrate approaches from ecosystem services and public health perspectives to maximize opportunities to inform policies for health and environmental improvement and protection

Ann Dale

Perhaps we need gardeners, birders, naturalists, museums, art galleries, walking clubs, outdoors clubs to unite around a common biodiversity action agenda?

There was a newspaper article in the last few months that said people living on a street with at least 10 trees reported being happier, and probably healthier as well. There is a different kind of connection one gets from nature, from being in the garden, but you have to be open to it.

Leslie King

I review research proposals for the Swedish research council and every year we get well developed and supported proposals linking health to urban greening. They have convinced me that this connection is irrefutable!

Ann Dale

In a conversation with a close colleague, one of Canada's foremost biodiversity experts, I learned something I didn't know about. Biodiversity loss is not only the number of species, it is the actual number of wolves, or loss of bees, it is the loss of absolute numbers, the weight of organisms of the species is absolutely decreasing. Our entire world is dependent on biodiversity, is there a critical mass of weight necessary before we reach irreversible thresholds. We tend to focus on species, but the absolute numbers are going down in all species (recent study in Germany and Norway). At the same time, the number of common rats is going up as well as the absolute numbers of human is going up. At present, we are the only species using three earths, therefore, other species have had to reduce their numbers to accommodate us?

That is why I like the [Nature Needs Half project](#), it shows people how critically important habitat is.

Are there other initiatives that we should be promoting, other success stories, what do you think we need to do to reconcile the biodiversity conservation imperative?

Bob Peart

Here is a good source of information, the latest [Living Planet Report](#). It is published by the WWF and is built around two key indicators – the Ecological Footprint and the Living Planet Index. It is very readable, packed full of data, great graphics and powerful text, and is as good a view of the state of the Earth as you will find.

It outlines most of the facts that you make in your note, Ann.

And [2020: Beyond Aichi](#), that the IUCN is working on is going to be based on the principles of nature needs half.

Leslie King

Thanks Bob, I use that Living Planet report all the time in my teaching — it is indeed very useful!

Ann Dale

Thanks, Bob, for those references. We led a series of biodiversity conversations on behalf of Women for Nature and will be releasing a **biodiversity action agenda** for all Canadians in the new year. My dream would be for everyone to build networks of networks around this agenda, bring it up at political meetings, send it to your elected officials, get it front and centre on the political agenda. What else can we do, we can't

get everyone outside, can we? Maybe the strongest motivation would be to make the links between health and nature stronger, use that as a communications campaign — sitting is the new cancer?

Leslie King

Good idea Ann, I think that would be a very good hook — not just you should appreciate nature, but that not going outside is killing you!

Bob Peart

Ann, you asked me once about where I get my hope, given the situation of the world and the challenges that people face.

My experience is that hope is something different to each person. To me hope comes from the real work of doing stuff and my experience and belief that everyone can truly make a difference. This sense of doing is at the heart of hope. Real hope comes from showing up, doing good things and sharing the truth about the state of the world, people and the climate.

And hope also comes with the pain of acknowledging your sadness. But it is crucial not to let that pain just sit, you need to find a way – your way – to deal with that pain in a positive way so that life can make sense and that you can see a role for yourself, a future pathway.

Hope comes from being outside, running through the forest, yelling at the sky and listening to the birds sing. Then when you have that joy in your heart, take it in and share it with your children, family and friends, as that brings hope.

Leslie King

And Howling with wolves! Well said Bob!

In my previous post, I answered that question — for me nature is the source of hope — it's destruction is also a source of despair: "I learned about the increasing threats to biodiversity and what that means to humans. So, I learned sadness and loss as well as hope and a calling to educate young people and adults about the lessons, precious nature and vulnerability of the natural world. I wandered the world to understand its nature. Work in Africa and the Arctic reinforced the truth of how dependent humanity is on the natural world physically as well as culturally. Yet I was there also faced with the tragedy of increasing destruction of the natural world even as it becomes more and more precious and scarce. I have dedicated my personal and professional life and career to teaching, research and conservation of the natural world, biodiversity and the

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Paul Allison

I totally agree with you Bob however, I cheekily remember a quote on the wall of a Thai Buddhist temple that said: 'the most hopeful are the most hopeless'. Being in the presence of the beauty of nature allows our minds to rest from thinking of the past and future.

Leslie King

Thanks Paul — and we stubbornly cling to optimism — because we must — despair is not an option!

Paul Allison

Unfortunately, a lot of people I meet suffer from anhedonia the inability to feel pleasure i.e. no joy from seeing a beautiful sunset. Depression and anxiety is leading to trillions of dollars in health care costs. There is a crisis with regards our health the solutions are very complicated. One of these factors maybe our busy lifestyles which lead to the release of cortisol a stress hormone affecting our bodies and mind. It is like we are being constantly being chased by lions! By the way the Japanese Kanji character for busy means 'to lose one's heart'.

Ann Dale

Question from @earnold in the e-Audience: "There are so many ways we can design our cities to enhance or discourage interaction with nature. Any examples?"

Paul Allison

Here is a useful book on that topic: Planning Cities with Nature: Theories, Strategies and Methods, by Fabiano Lemes de Oliveira.

Bob Peart

Thank you, Paul, I had not heard of that book.

Yes Ann, there is an entire literature on this. Stephan Kellert's book is perhaps the best known: *Biophilic Design: The Theory, Science and Practice of Bringing Buildings to Life*.

Ann Dale

One way is to design and redesign with nature in mind, as Paul talks about integration. An example we could build on is the research being led by Nina-Marie Lister at Ryerson University on designing wildlife crossings. They are aesthetically pleasing structures that allow wildlife to transverse roads going through their habitat. Imagine if we designed the roads in the first place to go around those areas.

Leslie King

Thank you for that book suggestion — it is a good one and there are several others on that topic. Perhaps we can exchange titles and links?

Ann Dale

My head is spinning with all the ideas, connections made between the need to connect not just outside, but nature and urban areas, and the connections that have been made between our health and the outdoors, but in a world where we are paradoxically sitting inside staring at screens. So, what do we do, how does one hold onto hope, building upon Leslie's post?

Leslie King

I have to go out and feed my birds! :)

Bob Peart

As I said in a previous post hope comes from doing good work at the community level, finding those champions and supporting them to continue 'the good fight'. We must show up and we must believe that an individual can make a difference.

My discouragement comes from 'the politics of it all' and the seeming inability to get beyond the short term urgent matters and getting re-elected.

Success is not build on working on the urgent, success is built by focusing on the important.

Ann Dale

This was an experiment in a new kind of e-conversation, more informal, and yet I found it rich in information. It is also a smaller group, so I am going to end the conversation in a few minutes, any last comments, dear friends?

Bob Peart

It is becoming increasing evident that:

- As we have become an urban species our indifference to and the lack of emotional connection with nature is an increasing problem of modern society.
- How can we expect to stand up for the importance of conserving clean air and water — which are fundamental to our health — if we have no connection to the out of doors.
- And how can we expect the air, water, soil, salmon and big old trees to be protected if our elected representatives, have no connection to the out of doors nor an understanding of how nature works.
- Our health as a species is inextricably linked to the health of nature's ecosystems — the air we breathe, the soil that grows our food, the water we drink. It sounds like a Yogi Berra expression, but we need to remember that 'Nature Bats Last'.
- It seems ironic, but here we are at a time when we are faced with perhaps the most numerous environmental challenges that society has ever faced, such as climate change, that the children and families of today's society are increasingly fearful and removed from the experience of being in nature and its importance to our future.

And remember it isn't just what kind of planet we are leaving for our children; but perhaps more importantly what kind of children are we leaving for the planet.

Leslie King

It was a great conversation, thanks all.

And earlier you asked about the role of reconciliation and this is my answer:

In Canada, Reconciliation is one of our few hopes. I quote from Chief Gordon Planes of T'souk-e Nation: "First Nations are leading the way back to sustainability..." if we but listen. And IPCC's SR 15 which you reference at the beginning of this e-Dialogue, writes "Local and Indigenous knowledge is important for limiting global warming:

SR15 recognizes that education, information, community capacity-building, local knowledge, and Indigenous traditional ecological knowledge (TEK) can accelerate behavioural changes. Policy acceptability of local and Indigenous knowledge systems is urgently needed for enabling the implementation of policies and measures that would lead to a 1.5°C pathway."

Bob Peart

Thanks Ann, I would just say in summary:

- The published literature is clear that outdoor play and activity is directly linked to physical health, cognitive development and self-confidence. Exploring and playing outside develops muscle strength and coordination, risk assessment, flexibility and motor skills.
 - Today's children and youth are increasingly a 'two-sense people'. (sight and touch) Exploring outside provides a sense of place, and gets all our senses working at once which is important to a healthy brain. This interaction...versus....all the senses being involved when outside.
 - The majority of us spend less than 30 minutes outside freely roaming or walking....a week. Yet we spend nearly 20 hours per week in front of a screen. (That is nearly 3 hours a day...)
 - To be healthy we need to be outside at least 30 minutes per day, and screen time needs to decrease to much closer to an hour.
 - And what is becoming increasingly crucial is the evidence that children under 2-3 years old should have no screen time at all because of the affect it has on brain formation, and the harm that may lead to future development.
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Leslie King

You also asked, when you were setting up the dialogue, 'what are your favourite books?' and I prepared an answer:

You know that is impossible for me to answer as I read hundreds of books a year and many of them are "my favourites". I often reread classics of English, Russian and French literature. However, I just returned from giving the Stefansson Memorial Lecture at the University of Washington. The title of my talk was "Learning from Northern People: Traditional Ecological Knowledge and Climate Change" so I have been rereading all the books on TEK - the new edition of Sacred Ecology by my friend Fikret Berkes, Charles Menzies' People of the Saltwater and TEK and Natural Resource Management as well as other inspirational books by authors such as Julie Cruikshank and many others. But after I returned home I did not want to stop hearing the gentle First Nations voices so I just finished Richard Wagamese's (author of Indian Horse) wonderful book, One Native Life a harrowing but beautiful set of anecdotes about his life as an abused foster child to his fame as a celebrated writer and the natural world

played a huge part in his reclaiming his identity and heritage -- it reminded me of another favourite book, a novel, *Tracks*, by Louise Erdrich. Both are Ojibway) I give you a quote from each to inspire you to read them! And I have just started the new book by Haisla author, Eden Robinson from Kitimat, *Son of a Trickster*. Stay tuned!

Wagamese on Canada: "To Love this country: Sometimes you Breathe this country in, and the air of it is wild, free and open, like a ragged song. There is a song that is Canada. You can hear it in the bush and tree and rock, the crash of a Pacific surf and the blowing of the breeze across a prairie sky. There are ancient notes in its chorus, voices sprung from Metis roots, Ojibway, Cree, Micmac (and I would add Inuit and many others) and then French, German, Scottish and English. It is a magnificent cacophony. I have learned that to love this country means to love its people. All of them. When we say, "all my relations", it's meant in a teaching way, to rekindle community. (including non-human voices). We are part of a great, grand circle of humanity and we need each other. It would not be Canada with one voice less."

And the opening of *Tracks*: "My girl, I saw the passing of times you will never know. I guided the last buffalo hunt. I saw the last bear shot. I trapped the last beaver with a pelt of more than two years' growth. I spoke aloud the words of the government treaty and refused to sign the settlement papers that would take away our woods and lake. I axed the last birch that was older than I..."

Reluctant to leave, I ask all of you — what are your favourite books? I was dying to know!

Paul Allison

Green Nature/Human Nature: The meaning of plants in our lives by Charles A. Lewis

Ann Dale

A new author for me is Frederick Backman, any of his books, he brings the emotional, spiritual and natural together in a magical way wrapped around critical social issues. Ah Leslie, you know how much we all read, another beautiful, beautiful book, *The Lost Words*.



Paul Allison

- Bird Books, as one of my hobbies is birdwatching.
- Books by E.O. Wilson, especially *The Future of Life* 2002
- Books about the grasslands and prairies, as that is my favourite landscape. Have you read books by Trevor Harriot?
- Books that I call 'historical fiction', novels based on real situations and historical events.

And J. B. Mackinnon, *The Once and Future World*.

Leslie, are you familiar with *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teaching of Plants*. Robin Wall Kimmerer. 2013