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Do Berries Listen? Berries as Indicators, Ancestors, and Agents in Canada's Oil Sands Region

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ABSTRACT

In this paper I discuss how being a student of Northern Bush Cree traditions has revealed some possibilities for understanding how berries listen, and respond to, living in, and on, the edge of areas of extreme extraction. Members of Fort McKay First Nation and Bigstone Cree Nations tend to their relationships with the sentient landscape and its entirety of living beings through respectful speech, behaviour, and harvesting practices. The agency of those living beings is expressed through their decisions as to whether or not humans can encounter, harvest, and share in their substance. By examining relationships of reciprocity between the human and other-than-human animal world from a post-humanist perspective, this paper seeks to expand upon traditional indicators of contamination resulting from the large-scale industrial development of the Athabasca oil sands in First Nations' traditional territories, and to value and share some observations and knowledge of Cree Elders and knowledge holders.

KEYWORDS Northern bush Crees; Athabasca oil sands; post-humanism; berries; other-than-humans

Grandma, why do you call them relatives with roots?

We old people believe that we are related to everything in creation. I was taught that the plants and the animals were all created before humans. As such, we humans are the most dependent on everything else in creation. We need to show respect to our older brothers and sisters who were created before us, Grandma explained.

As we walked together along the old bush trail, Grandma started to greet every plant. Grandma had conversations with each plant in the same way that she talked to me.

She explained to the plants why we came into the bush. Grandma also told our relatives with roots how we intended to use the medicines that they were giving to us to help our family be healthy. It was fun to listen to the way she talked to the bush that was all around us.

—From Leah Marie Dorion's children's book, *Relatives with Roots*

My fondest childhood memories are of berry picking with my grandparents, who are of settler and Métis ancestry – Métis referring to people of mixed First Nations and

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European (in their case, French) heritage who settled around the Red and Saskatchewan rivers—Bud and Marie Sheets. Now in their eighties, they still manage to take a trip to Saskatchewan each year to pick highbush cranberries (*Viburnum opulus*). When I was young they had a berry trap line or trail with patches of various species of berries. The line started in British Columbia, wound its way through Alberta (where family members lived), and stretched all the way to my grandma's familial territory near Battleford, Saskatchewan—a distance of over 800 kilometres. Our family vacations all revolved around berry picking. One fond memory in particular stands out to me. We had driven up a muddy, greasy, and deeply rutted dirt road to a blueberry patch on a grassy hillside, strewn with large fallen and rotting logs; everyone was eager to get started picking. I had just a few berries in my ice cream pail when I came across Great-great-Uncle Bill Sheets in the bush. I was giddy to see my uncle there, as he always made me laugh; he was a loud, boisterous man who seemed to me to be three metres tall. Uncle Bill told me to tip my pail upside down so I could use it as a drum. I froze. I was not supposed to waste berries. I had been taught that I should never spill them or even act silly while picking in the patch. I was maybe 10 years old at the time, and here was my Elder telling me to do something I knew would get me in trouble, but I did what I was told. I tipped my bucket upside down and the few berries I had inside it spilled out onto the ground. I began making a beat on my makeshift drum, not unlike the rhythm the berries had made when dropping into the pail, and Bill sang a song to the berries that sounded like gibberish. When he had finished, he yelled down to the other adults that he was coming their way, joking that he 'couldn't get any berry picking done around these darn kids'. Looking back on this funny and frustrating moment, I cannot help but wonder if Uncle Bill was making sure that we paid proper respects to the berries by offering some berries back to the ground—perhaps to spread the seeds—while also offering a song of gratitude before we filled our pails.

I use the story above to explain just what might prompt someone to write about the ability of berries to listen to humans, given all their other remarkable qualities. The berry's ability to listen is something that my sakāwiyiniwak (Northern Bush Cree) research collaborators and teachers have emphasised while in the berry patch, and telling stories and reflecting upon berry patches. For sakaw nehiyawewin (Northern Bush Cree), a subdialect of Plains Cree Y dialect (see Westman & Schreyer 2014) speakers, berries act as semiotic agents who listen to how you speak about, and to, them, and respond accordingly. Now, there are examples from a recent wave of scientists describing plant sensory apparatuses for 'listening', suggesting that berry plants and their fruits have senses and forms of communication that stretch beyond our wildest imagination. If we all can accept that berries listen and, as Eduardo Kohn argues, that entire forests think (2013), then perhaps Indigenous forest management practices can be recognised in state management regimes, before it is too late.

The title of this article reflects an admiration for the work of Elizabeth Povinelli and Julie Cruikshank, in which they ask if rocks and glaciers listen. In her article 'Do Rocks Listen? The Cultural Politics of Apprehending Australian Aboriginal Labor', Povinelli (1995) recounts her 1985 experience with four Belyuen Aboriginal colleagues during

a land claim hearing in Australia. Povinelli and her colleagues observed an Australian land commissioner's inability to believe one of the Belyuen team's testimony regarding a landscape feature, or 'Dreaming' site: that human-environmental interactions are necessary in order to ensure the on-going health and productivity of the land (505). The team member explained how the Dreaming site, known as 'Old Man Rock', could listen to, and smell the sweat of, Aboriginal people as they passed by.

In *Do Glaciers Listen? Local Knowledge, Colonial Encounters, and Social Imagination*, Julie Cruikshank explains how glaciers also act as semiotic agents, and how Athapascans and Tlingits have observed that glaciers listen, smell, and animate landscapes (2005). Cruikshank's argument is shaped by various oral traditions, and stories shared with her by Yukon Elders Kitty Smith, Annie Ned, and Angela Sidney in which place, personhood, and kinship are 'deeply interconnected' (68). In these stories, glaciers appear as living sentient beings, and sometimes acting as dens for ancient giant animals. Both the glaciers and giant animals are aware of, and respond to, human behaviour based on 'moral dimensions that illuminate social values and consequences of breaching them' (68). For example, when a glacier surges, it is thought that human (mis)behaviour is the prime suspect behind that shift, and that landscape features, like glaciers, are central to the shaping of social worlds, along with systems of kinship.

Cruikshank observes that the distinction between humans and non-humans (like glaciers), is very blurry (2005: 69). Glaciers are able to observe, listen to, and participate in relations of respect and reciprocity, and people go to great lengths to avoid disrupting these relations. Glaciers can smell meat frying and they are 'quick to hear and to take offence when humans demonstrate cockiness by making jokes at their expense' (69). Cruikshank also spends a great deal of time in her book describing encounters between Elders, explorers, and scientists who co-produce knowledge about glaciers. Often though, scientists can only appreciate the knowledge that Elders share insofar as it can be understood scientifically, dismissing all other types of knowledge as 'superstition'. As with the case of Alberta's oil sands region,

environmental politics have so normalized our understandings of what 'nature' means that we can no longer imagine how other stories might be significant, so we become complicit in processes that make indigenous languages and narratives seem irrelevant to the modern world. (258)

I argue here that the ability of berries to listen is, in fact, relevant to the modern world.

In this paper I discuss my ethnographic experiences with sakāwiyiniwak in their traditional territories—now known as northern Alberta, Canada—as they relate to berries. This region is infamous for its underground deposits of bitumen, known as the Athabasca Oil Sands, and the extraction of said bitumen by mining and *in situ* extraction methods. These methods disrupt large tracts of First Nations and Métis traditional territories, and dispossess them of food security and sovereignty. These traditional territories fall within Treaty No. 8 (Canada 1899), which is an agreement that First Nations signed with Queen Victoria guaranteeing that signatory members of First Nations can practice traditional activities on the Crown (or public) lands which

make up a large portion of the land mass of northern Alberta. Numbered Treaties in Canada set out the various obligations and concessions that exist for both the Canadian Government and Treaty signatories. The Federal Government has not upheld their side of these agreements, however, especially those made by the commissioners that ‘the treaty would not lead to any forced interference with [First Nations] mode of life’ (Canada 1899). But those same treaties are utilised by the Government to facilitate the extraction of natural resources from Crown lands (Baker & Westman 2018).

My discussion here is informed by the results of a community-based project in Fort McKay (a Cree, Dene, and Métis community) that I have supported since 2011. The project is funded by the provincial and federal governments and technical support is provided by the Wood Buffalo Environmental Association (WBEA), a non-profit organisation that monitors air quality in the Municipal District of Wood Buffalo, a jurisdiction that includes the oil sands mines of Fort McMurray. The WBEA is a collaboration of community members, government, environmental groups, industry, First Nations, and Métis members. As a founding member of WBEA, Fort McKay First Nation—the community that is quite literally the most affected by open-pit oil sands mines, being fully surrounded by them—has been voicing its concern about berry contamination for years. As a pilot project, Fort McKay designed a cranberry (*Vaccinium vitis-idaea*) and blueberry (*Vaccinium myrtilloides*) berry-monitoring project that is directed by the knowledge of community members and their observations regarding berry contamination. Further, the WBEA has provided passive air and weather monitoring stations for the berry patches. I work with a group of about 15 Fort McKay berry knowledge holders (comprised of Elders, youth, and land users), and we travel to the berry patches each spring through to the fall, checking the berries and habitat, and then collecting berries before sending them to laboratories for analysis of their nutritional quality and the presence of pollutants (Baker & Fort McKay Berry Group 2019; Baker 2016).

My role has been to record ethnographic information shared by the Fort McKay Berry Monitors that we then use in an ‘ethnographic loop’ (Fortun 2012: 453) to inform future project design, especially in regard to scientific testing and monitoring. Based on anthropologist Kim Fortun’s work, ‘insight from the research is being fed back into the design of the project, functioning as what we call “substantive logics,” which operate alongside what we call “design logics,” drawn from what is usually thought of as “theory”’ (Fortun 2012: 453). These substantive logics lay out the discursive habits, gaps, and risks of the problem domain in which pollution operates, which is made up of overlapping systems and worlds (2012: 453). In this period of ‘late industrialism’, ethnographers need to collaborate with those whose problems they are studying, and be open to futures that cannot yet be imagined (Fortun 2012: 459). The Fort McKay berry project is an example of ethnographic research that is community-based and that responds to ‘emergent realities’ in creative ways.

For example, our annual verification meetings are designed to fulfil this creative feedback loop role. At these meetings, the Fort McKay berry group members review drafts of annual reports and results, decide on changes to the project design, determine field schedules, and define approaches based on their own environmental observations,

spiritually-based knowledge of the landscape, and community needs. I attend all berry monitoring and picking field trips, ask questions, help pick berries, and do whatever else is required from me; I also spend time with the berry group members, personally and in meetings, with the intention of participating in reciprocal relationships as a part of the research process (Baker 2016).

This paper also draws on my doctoral fieldwork in anthropology, conducted in collaboration with the neighbouring Bigstone Cree Nation, regarding their experiences with wild food contamination, berries included. During my time in Bigstone Cree Nation territory, we were the recipients of a Health Canada First Nations Environmental Program grant that allowed us to sample 150 wild food items and test them for contaminants related to oil sands activities (Golzadeh *et al.* 2020).¹ The work built on the six years I spent working as a traditional land use research consultant for First Nations and Métis in Alberta and Saskatchewan prior to starting my doctoral research. While that work does not officially constitute part of my ethnographic findings and writing, the relationships that formed during that time, and the knowledge that was shared with me, especially teachings from Fort McKay First Nation and Bigstone Cree Nation Elders, continues to influence my thinking, and this paper. Finally, as the opening story about my uncle illustrates, I am also informed by my personal experiences as a passionate, Settler, berry picker, with maternal Métis heritage.

As the quotation from *Relatives with Roots* (Dorion 2011) at the outset of this paper demonstrates, many First Nations and Métis origin stories remind us that humans were the last species to arrive on earth and so we are dependent on the wiser, older, ‘other-than-human persons’ (Hallowell [1960] 2002) for their mercy and offerings (Kimmerer 2013; Watts 2013: 25; LeCompte-Mastenbrook 2015). Humans came into already functioning societies that had established and ensconced particular values, cultures, and ethics. Humans thus had to enter into agreements with animals, plants, and other living beings as relations or as kin (Reder 2012: 509). Rather than anthropomorphising plants (see Myers 2015), in this context of berries listening, I am considering how plants are treated with respect and reverence as kin. Ethnobotanist Linda Black Elk refers to the ‘Plant Nations’ as our relatives, and as allies whom we are obliged to protect when they are in danger (Black Elk & Baker 2020). Tlingit and Tagish Elder Kitty Smith explained her relationship to the land to anthropologist Julie Cruikshank like this: ‘I’m born here. I branch here. The government got all this country, how big it is. He don’t pay five cents—still he got it all! Nobody kicks me out. No sir!’ (Cruikshank 1990: 16). Cruikshank goes further to describe how place, personhood, and kinship are all deeply interconnected and ‘if the boundary distinguishing animals and humans is fuzzy, the boundary distinguishing persons (whether human or non-human) and features of the land is equally indistinct’ (Cruikshank 2005: 68). These fuzzy boundaries are what make berry patches, plants, and fruits all capable of exhibiting person-like attributes (Figure 1).

Sakāwiyiniwak obligations of respect and reciprocity are based in their recognition of personhood as existing in all beings. Humans are neither distinct from, nor to be set above, other creatures. Rather, they are simply one type of being that interacts with ‘a network of reciprocating’ beings (Scott 1996: 72). And so, ‘hunter and prey are



Figure 1. Velvet-leaved blueberry (*Vaccinium myrtilloides*) with Fort McKay Elder Sally MacDonald picking berries in the background. Photo: Janelle Baker 2017.

thus successively subject and object in an endless cycle of reciprocities' (Brightman 1993: 187–188). All beings express and interpret signs and respond in reciprocal relations according to the degrees of respect shown to respective parties. An animal or medicine offers itself to a respectful harvester, and then that harvester shows respect to human community members by sharing the bounty, the recipients of which later also reciprocate by sharing their own bounties. Being on the land together and gathering berries is an act of respect and reciprocity. Berries continue to be a preferred food source, often used as a medicine and distributed throughout the community, reinforcing community cohesion. People do not simply collect berries in the bush and take them home to eat them. Rather, they bring them to Elders, family members, and friends who need them, either as medicine or because they are low on food. They also share them with people who share their bush food with them, such as moose meat and smoked fish (see Parlee & Berkes 2006). Sharing berries with people who are elderly, unwell, or with whom the picker wants to maintain important social ties, is another way of showing the berries respect. If a person hoards or squanders berries—particularly when others are in need of them—the berries will be offended by this lack of respect.

In this sense, the communicative relationship that I have witnessed between sakâ-wiyiniwak berry pickers and berries in northern Alberta is arguably another

ethnographic feedback loop. When I say ‘communicative relationship’ I mean that berries not only *hear* people speaking to them, but that they also *listen*, an act that is demonstrated by their behavioural responses to what they have been told or overheard. For *nehiyawewin* (Plains Cree) speakers, ‘listening and speaking are equally active roles in communication’ (Darnell 1990: 97). These verbal and behavioural interactions allow a ‘coming-into-being’ based on ‘continually and reciprocally bring[ing] one another into existence’ (Ingold 2006: 10). This existence is disrupted when people do not speak to the berries, and instead ignore or alter the protocols of communication, thereby affecting the systems of reciprocity between humans and berries and, potentially, the entire ecosystem. Like many beings that offer themselves to humans as food, when they are not tended to and cared for they will leave, or cease to exist in the same state of abundance, effectively ‘turn[ing] away from each other and ... certain forms of existence’ (Povinelli 2016: 28).

Métis anthropologist Zoe Todd (2017) writes about how these reciprocal relationships are affected by Alberta’s aggressive oil and gas extraction:

The growing presence of ... fossil-fuel progeny in every aspect of these territories, creates urgency in our collective work to tend to ongoing reciprocal relationships between humans and more-than-humans in the prairies. Those long-dead dinosaur-era beings, liquefied as they are, now manifest their presence as bitumen, oil, natural gas, and the plethora of materials produced from petrochemical processes that humans consume every day. The plastics, pesticides, and the oils mixed with proprietary chemicals to ease their movement through pipelines that pervade every corner of my home province, are constantly moving through the territories those dinosaurs and ancient plants and other beings once roamed ... I have finally come to understand that my Métis dad and non-Indigenous mom’s work in teaching me about the lands, waters, fish, berries, invertebrates and other beings of where I grew up was an instructive form of philosophy and praxis which imbued within me a sense of my reciprocal responsibilities to place, more-than-human beings and time ... I hope that I can encourage settler Canadians to understand that tending to the reciprocal rationality we hold with fish and other more-than-human beings is integral to supporting the ‘narrow conditions of existence’ in this place. (97–99)

Scholarship in Canada on *nehiyawak* or Cree² relationships of reciprocity with other-than-human persons is not new—particularly that which focusses on animals. Adrian Tanner (1979), Harvey Feit (2001) Feit and Beaulieu (2001), Colin Scott (1986, 1989, 2001, 2005, 2006), Robert Brightman (1993), Naomi Adelson (2000), and others have been writing about Cree ontologies and epistemologies, traditional environmental knowledge, environmental philosophies, and systems of respect and reciprocity since at least the 1970s. However, they have not written about these topics from the perspective of *sakâwiyiniwak* communities in northwestern Canada, or in relationship with ethnobotany, ethnoecology, and political ecology as much as I do here. In particular, these authors have focussed more on Cree ontologies in relation to hunting, and not so much in relation to plant or specifically berry sentience. By exploring the ability of berries to listen we are afforded perspective on how the political decisions made beyond the berry patch both can, and cannot, address the *sakâwiyiniwak* belief that the landscape is made up of sentient beings that have the power to determine the well-being and survival of humans.

Minsa³: Berries are Our Relations

If you take berries or roots you talk to the plants for the reason you want it for as like medicine for yourself or someone else. Berries or roots are very powerful to heal an ailment, that you have or someone else, so you pray to the Creator and Mother Earth and offer tobacco, and yes they can hear you.

— Fort McKay Elder Elizabeth Orr, who passed away in the fall of 2017

Fort McKay residents are bound to berries in a variety of cycles of reciprocity. People need to show berries proper respect through offerings, appropriate speech (Darnell 1988), and their harvesting and consumption practices (Brightman 1993; Thornton 1999). Doing so will ensure that berries continue to appear and show themselves (Turner 2003) so that humans may encounter and pick them. Once picked, they need to be shared share with the sick and elderly—people who are unable to go out and collect berries themselves. Showing respect through these processes also involves never taking more than a person needs, or more than the picker can share or distribute throughout the community (Parlee & Berkes 2006). Cranberries store and ripen well, but they must be tended to even after harvesting, being eaten throughout the winter and never wasted or sold (Murray *et al.* 2005: 37).

The processes of consumption for berries makes them a ‘renewable’ resource (Murray *et al.* 2005: 37). The current problem, however, is that extreme levels of extraction from the landscape resulting in both pollution and limited access to Fort McKay berry patches, is sending these reciprocal relationships into a negative downward spiral. Berries now are smaller, dried up, and contaminated. Fort McKay residents are left with the overwhelming task of trying to right this imbalance. They must correct the now-negative relationships between the landscape, berries, and each other in order to ensure the well-being of their communities and their grandchildren, despite having played no role in the creation of these.

In 2013, Fort McKay Elder Walter Orr (see Figure 2) stood up at the annual results verification meeting for the community-based berry monitoring project. Walter, a singer-songwriter and skilled and humorous storyteller, is known for being outspoken and, at times, confrontational. At this meeting, however, he told those gathered that this year, the berries had been better than any he had seen in over 20 years, and several of the other project members agreed. He credited the abundance of healthy berries to the existence of the project, because prior to 2011 they had been neglected. Now we were visiting them, making offerings, and picking them. And so, to reciprocate, the plants produced fruit as nourishment for us.

Something else that I believe contributed to the improvement in both berry quality and quantity, is what the berries *heard* and *listened to* while we were in the berry patch. Not only did we speak to them with gratitude, but nearly the entire time people were there they were almost always in a pleasant mood. The fresh air, companionship, happy memory-making, and storytelling that accompanied our time in the patch contributed to a cheerful atmosphere—one to which listening berries would have been attuned. Upon reflection, I have come to realise that this is one of the reasons why having a good mood in the berry patch is what people call ‘protocol’ in English (see



Figure 2. Fort McKay Elder Walter Orr picking cranberries (*vaccinium vitis-idaea*) at Moose Lake. Photo: Janelle Baker 2016.

Poirier 2011) or *miyohtwâwin* in sakaw nehiyawewin, which means to be good-hearted or good-natured and morally upright (Waugh 1998: 91). Demonstrating gratitude and respect for the food and medicines that offer themselves to us requires that we avoid feeling or showing anger or being hurried while in the bush. Another element of protocol which should be observed, are the offerings mentioned above, wherein tobacco is offered and a prayer is spoken or sung before taking from the land (Turner 2005: 95). All this is required because, as several Fort McKay and Bigstone Cree Nation Elders have taught me, berry plants decide whether or not to produce fruit, and whether or not an individual will encounter, or quite literally *encounter*, them in the forest.

Sakâwiyiniwak consider large tracts of land to be polluted because of companies' failure to show the land respect, and their failure to include proper spiritual protocols into the development of industrial projects. This alone contributes to people's unease about harvesting wild foods in proximity, as they thus present possible negative effects for both physical and spiritual well-being (Thompson 2005: 50), not to mention the potential breakdown of traditional family units that are formed around being on the land (Nelson *et al.* 2005; Alfred 2009). Even when berries grow near Fort McKay, people do not want to harvest them due to pollution, and so they travel farther and farther away in order to find berries and other medicines they can trust. Distance can act to sever access to crucial foods and medicines; many people lack the funds for fuel and/or access to the necessary vehicles and float planes to travel to 'clean' areas.

Walter Orr from the Fort McKay Berry Group speaks of getting medicine from as far away as Saskatchewan, because he believes the ones near Fort McKay are contaminated and have lost their power due to lack of respectful care. I have heard many others express their concerns that medicines used to be more powerful, but they are losing their power again, due to lack of respect and proper use, as well because of industrial contamination. Albert Yellowknee from Bigstone Cree Nation talked about how people do not trust food and medicine from around Wabasca anymore either because of the presence of industry, so they are having to travel farther away to find what they need.

Because berries—along with other foods and medicines—can hear what you are saying, people must also avoid offending them by speaking about or to them in a rude or disrespectful manner (Darnell 1990); beings that offer themselves should never be mocked or embarrassed. In the nehiyawewin-speaking (and English) world it is often considered rude to speak of a person who is within earshot and berries, as other-than-human persons should be treated with the same consideration. In fact, in nehiyawewin, the name for blueberry, *iyinimin*, translates to ‘person’ berry (Marles *et al.* 2008: 182). This is true for any powerful being of the landscape; disrespected beings will be unhealthy, polluted, or in extreme cases, simply may cease to exist. Once respect has been paid to the berries through offerings and vocalised gratitude, appropriate behaviour is then better understood by what is *not said* around them, rather than what is. As such, people avoid speaking poorly about anything or anyone in the bush in general, and especially while in the berry patch. Instead, people tell happy and funny stories, including stories of *wisahkecāhk* (Wagh 1998: 231).⁴ They also take particular care to avoid speaking negatively while smoking, as the tobacco smoke takes their words directly to the Creator.

Ethnobotanist Nancy Turner describes the ‘humanness’ of wild blueberries as expressed by the Nuxalk in British Columbia, through a story originally recorded by Thomas McIlwraith in 1948 in the story, ‘The Woman Who Befriended a Wolf,’ about a woman named Ksninsnimdimut. This story demonstrates well how behaving in a disrespectful manner can offend the berries and cause them to hide from human pickers:

She was starting to climb a steep bank to a shelf where she noticed that the fruit was plentiful, when she heard one of the berries speaking to the others: ‘Let’s hide,’ it said, ‘that foul-mouthed woman is coming.’ The berry was speaking about the woman herself, calling her ‘foul-mouthed’ because she had a habit of eating the berries as she picked instead of putting all of them into her basket. *Ksninsnimdimut* hurried up the bank so fast that many of the berries were unable to hide and she saw them in their human forms: ‘a host of goggle-eyed little boys sitting on the berry shoots.’ After this lesson she was more careful about respecting the berries’ wishes: she never ate the fruit as she picked, but chewed on dried salmon instead. She became a very successful berry picker because, from then on, she was always able to see the berries in their hiding places. (Turner 2005: 84)

The first time I learned that it was possible to offend berries was in about 2006, when I was driving around with a friend on the O’Chiese First Nation reserve in the Alberta foothills of the Rocky Mountains. We stopped by her brother’s place and she pointed

with her lips in the direction of a spot in front of his house where there used to be a good blueberry patch. I say that she used her lips—a practice of sticking one's lips out and angling them in a particular direction—deliberately to point at the berry patch, as this is considered a polite way of indicating to another person; pointing with your fingers is considered extremely rude and also a way of directing bad medicine or a curse at someone. And so by pointing with her lips that day, my friend paid the same respect to a berry patch as you would a human, even though the patch no longer held berries. With disdain, she explained how her sister had picked blueberries from that area during her first year of menstruation, which is meant to be a year of abstinence from blueberry harvesting and consumption in O'Chiese First Nation. The blueberries were offended by her sister's behaviour and unfortunately were now no longer producing fruit.

Conversely, outside of situations such as the one described above, berries are 'there to be picked' (Thornton 1999: 37). If they are not tended to in this manner, as Walter Orr implied, they are not likely to produce berries in future years. Part of the reason for this is that most likely, the passive pruning of bushes that occurs as bushes are rustled during picking causes some ripe berries to drop, and thus helps to produce and seed more berries (Deur 2009; Kimmerer 2013). Therefore, the act of picking and consuming berries serves as another form of showing respect, by ensuring that they continue to be a renewable food resource (Thornton 1999). Birds, bears, and other animals also have a role to play in the reciprocal relationships of berry harvesting, pruning, and seed spreading that increases the berry plant's likelihood of propagation and survival.

Herman J. Michell, a Professor in Education who is of Woodland Cree heritage, describes how picking berries is essential to the Cree way of life, and is about more than just sustenance:

I grew up knowing I was a part of the land and the land was a part of me ... Gathering berries brings family together. Any sense of alienation and isolation quickly dissipates as people actively engage in simple talk ... Gathering berries helps people communicate with that quiet stillness where peace and wisdom dwell. It is through berry picking and prolonged periods of time out on the land that we bond with the natural world ... We experience the ethical space of spirit becoming physical. The berries that nourish our thinking become a part of our living/talking/experiencing/being. It is in the midst of these moments that we see rays of sunlight striking through clouds reminding us that spirit flows through all things. (Michell 2009: 66–71)

Being on the land together and gathering berries is at the heart of the Fort McKay project. We make monthly visits in the non-winter months to four berry patches that have a variety of berries and medicines, but of most importance are the cranberry or lingonberry (*vaccinium vitis-idaea*) and velvet-leaved blueberry (*vaccinium myrtilloides*) patches that Fort McKay members have tended to for many generations. Both of these berry species have been identified as 'cultural keystone species' (Garibaldi 2009) through published research with Fort McKay residents. The Fort McKay berry group participants specifically chose these berry patches to monitor because the three patches closest to Fort McKay, are also very near to oil sands mines and upgraders (facilities that upgrade bitumen into synthetic crude oil) and people no longer trust the edibility of the berries due to contamination from industrial airborne pollutants

(Landrigan *et al.* 2017). The fourth berry patch is located farther away, in a sacred place known as Moose Lake, also identified as a 'cultural keystone place' (Cuerrier *et al.* 2015). Moose Lake is the one location where people still trust the berries to be what they call 'clean', meaning they are free from industrial pollution and therefore more powerful nutritionally and as medicine, and so Fort McKay members prefer to harvest them from there. Cranberries are particularly abundant and valued in Moose Lake. However, it is quite a distance from Fort McKay and is difficult to access, so the elderly have to travel by float plane, which is, of course, costly. It is also worth noting that several important berry patches near Fort McKay are now completely inaccessible, simply because they have been mined, or because mining companies have disrupted traditional trails and replaced them with gates and fences. People from Fort McKay are increasingly being severed from a culturally and nutritionally essential food supply and people are feeling the strain of having to travel the long distances required to harvest berries. Berries continue to be a preferred food source, are often used as a medicine (Baker & Fort McKay Berry Group 2019), and are distributed throughout the community through systems of respect and reciprocity that reinforce community cohesion. People do not simply collect berries in the bush and take them home and eat them, rather, they bring them to Elders, family members, and friends who need them, either as medicine or because they are low on food. They will also share them with people who share their bush food (such as moose meat and smoked fish) with them (see Parlee & Berkes 2006). Sharing berries with people who are elderly, unwell, or with whom the picker wants to maintain important social ties, is another way of showing the berries respect. If a person hoards or squanders berries in general, but in particular when others are in need of them, the berries will be offended.

Albert Yellowknee explained to me that berries can become so offended that they will leave entirely; they move out of their patch. Before hearing this from him, my understanding had been that when people say that berries do not appear if you do not respect them, that it meant that they would hide, as demonstrated by the berries in the Nuxalk story above (Turner 2005), or just cease producing berries (which still may be the case). But Albert made explicit something I had only ever heard whispers of before: that entire berry patches will pick up and move somewhere else if they are not cared for properly. With this, I am eerily reminded of the fact that boreal forest and permafrost lines are creeping farther north due to climate change and deforestation, and that the animals that inhabit these parklands are moving into new environmental frontiers (Tsing 2005).

Several sakāwiyiniwak have told me that if you place a rock in your yard and pay attention to it, you will see that over a long period of time, it actually moves, however slowly, across the yard, making a trail. Rocks are alive (Povinelli 1995): they just move more slowly than humans can perceive but they are living beings that 'exist along a path' (Ingold 2006). Perhaps berries also have their own trails like those humans tend with care and use to come to the patches (McCormack 2017). People who maintain these traditional paths are also tending to their relationships with the berries (Black Elk & Baker 2020; Naxaxalhts'i 2007), and the 'ever ramifying



Figure 3. 'Anointed Bloom' by Fort McMurray Métis artist Carmen Wells. Used with permission of artist (painting owned by Janelle Baker).

web of lines of growth' (Ingold 2006: 13) that radiate throughout berry patches, people, and animals both above and below ground to make berry conversations possible. The movement of berry patches and berries is facilitated by the humans and animals who pick those berries and spread them around, sometimes dropping and seeding them, often moving them through social networks of sharing and feasting, all the time communicating something as they go: respect, friendship, well-being, genetic information, and perhaps more.

Berry Phytocommunicability

From the inception of the berry monitoring project, I have been concerned about the negative implications of using scientific research to either prove or disprove what the Elders are finding. Not only could such an approach undermine the value of their knowledge in a system that prioritises European thought, but in a practical sense I worry that the findings can be used to contradict communities who are voicing their concerns about the impacts of natural resource extraction on their food security and sovereignty. For example, if our berry research does not find contaminants in a place Elders consider the berries to be unsafe, oil companies could publicly recite their favourite refrain that there will be 'no significant impact,' even as Elders have been severed from important food supplies based on the fact that they consider the place contaminated. That being said, we do often find that the scientific results reinforce the Elders' observations, to the extent that the Elders often get the sense that the science

is finally catching up to what they have been saying all along (LeCompte-Mastenbrook 2015). For example, I can remember people expressing their concerns about dust on the berries when I first started working with First Nations in northern Alberta in 2006. Back then consultants often had an eye-rolling response to hearing concerns about residue on berries, saying something along the lines of ‘Well, if the berries are dirty, just wash them.’ However, scientific research in the oil sands region is now showing that that dust is the primary vector for the transmission of heavy metals coming off of mine sites in the region (Percy 2012) Figure 3.

This notion that science is just catching up with traditional knowledge is also playing out when it comes to the sensory perception of berries. Some plant scientists are now claiming that plants respond to sounds (Trewavas 2005) and send communication signals (Agrawal 2000; Chamovitz 2012; Dicke *et al.* 2003). In an article entitled ‘Plants talk, but are they deaf?’ the authors provide evidence that plants do sense and respond to sound and they even use the term ‘listen’ to refer to plant responses to sounds (Dicke *et al.* 2003). In their field studies, wild tobacco plants responded to chemical messages sent by insect-damaged artemisia plants. They responded by producing a defensive enzyme that protected the tobacco plants from the insects, demonstrating the existence of interspecific plant-plant communication (404). Likewise, in the lab lima bean plants responded to odours emitted from spider-mite damaged lima bean plants by self-inducing the expression of several defense-related genes (404).

Authors Mancuso and Viola question why the absence of ears should prevent plants from hearing, and describe, from a scientific perspective, how plants hear (Mancuso & Viola 2015): ‘The earth conducts sounds so well that ears aren’t needed in order to hear; the vibrations can be captured by all the cells of the plant, thanks to the presence of mechanosensitive channels’ (73). The ability to hear, for plants, is not concentrated in a single organ as it is in animals, but rather comprises the entire plant, and a plant community can hear ‘somewhat as if—below and above ground—it were covered with millions of tiny ears’ (74).

Many of us have been told to talk to our house plants, or play classical music to our tomatoes and orchids. I often wonder whether people singing or drumming in their favourite berry patches, or laughing and telling pleasant stories, or even Walter Orr blaring Cree country rocker Ernest Monias from his truck’s radio when we are in Fort McKay’s berry patches, if any of this emits a sonic vibration that is positive for the plants. Interestingly, laboratory results do show that music, especially with bass, enhances the full expression of genetic traits in plants, and in one case, music made grapes grow and ripen faster and kept damaging insects away (Mancuso & Alessandra 2015: 75).

There is also research that suggests that roots can emit and perceive, or ‘hear,’ sounds, implying ‘the existence of a previously unknown underground communication pathway’ (Mancuso & Viola 2015: 77). Recently, a research team found that plant roots responded to the acoustic vibrations that water makes when moving through sealed plastic pipes, and the roots propagate through substrate, even when they cannot sense the moisture (Gagliano *et al.* 2017). Amazingly, roots can respond to environmental cues that suggest the most reliable types of water sources indicating a long-

term advantage to the plant, such as indicating the depths of different sources of water and therefore, the future reliability of said water source (Gagliano *et al.* 2017). The suggestion of such an ‘underground intelligence’ is particularly interesting to consider in those places where the underground is being mined.

Do Berries Listen?

Sometimes when the huckleberries shined a certain way, I felt that they recognised me. On my last day of fieldwork there, I had the overwhelming feeling that the place itself recognised my presence and welcomed me back.

—Joyce Kelly LeCompte-Mastenbrook

If berry plants can both hear and respond to us, what are our responsibilities for their well-being? What is our responsibility for those berries that remain on the edges of large-scale human disturbances, who absorb toxic air and get covered in dust from construction sites and roads—dust that acts as a vector for the heavy metals that can then be taken up through the berry’s skin? Or when the land is cleared or polluted and the berries get sick and die. In sakaw nehiyawewin the word *piscipotâw* which means ‘to contaminate,’ is synonymous with poisoning or killing something on purpose (Waugh 1998: 168). If a river has been contaminated, Elders lament that it has been killed or wasted. Even a river that still has water in it and moves is no longer considered to be ‘alive’ when it cannot support other life: Fort McKay Elders say it has lost its soul (Buffalo 2011). Understood as such, the sakâwiyiniwak concept of ‘killing landscapes’ raises important ethical questions regarding the proposals by natural resource extraction companies in Alberta for mined land reclamation.

These companies will often argue that they are increasing berry habitat through their disturbance of the land and clearing of larger trees and shrubs. While there is no question that many berry patches are completely removed for industrial projects, it is still suggested by companies that other places where the forest is ‘cleared’ (read: all plant life is completely removed) for linear developments—such as seismic cut lines, dirt roads, pipelines, and power lines—will open up new areas for berry plants to grow. But are these new berry patches healthy and full of the powerful nutrients and medicines with which they are normally imbued? Would *you* eat berries that grow on top of a pipeline? Have the oil sands companies thanked the land for what they have taken or provided it offerings? Are they taking more than they need—hoarding rather than distributing?

In her years of applied work, Povinelli has been witness to many similar cases where Indigenous beliefs were challenged, particularly ones in which claims regarding Dreaming sites were questioned, such as whether they could listen, smell, act with intention, or react to human behaviour. The question of belief is linked to economic, political, and social values in terms of how these places are assessed and understood in relation to the monetary value of the materials that can be extracted from these landscapes, and the wage labour such work produces. When Povinelli observed Aboriginal people she worked with providing testimony at a land claim hearing on Old Man Rock, a sacred and sentient landscape feature, everyone ultimately knew the land commissioner and

other government officials would not believe that Old Man Rock was alive or could listen, and so would not grant it the same protected legal status as those sentient beings they considered 'alive.' She explains, 'Aboriginal traditions are legally productive not because they are 'true' but because they are beliefs and thus part of the multiculturalism to which the contemporary nation-state can demonstrate a liberal reconciliation. But reconciliation with multiculturalism ends where a conceptual accommodation to a multi-economism would begin' (506).

Like Povinelli, I have been told by several people from Bigstone Cree Nation that rocks are alive and that if you pay attention, you can see that they move slowly over time. There are also other creatures that live in Bigstone Cree territory that are not recognised by western science: little people, sasquatches, dog-sized frogs, and a water snake/serpent, to name a few. The former is said to move between lakes via underwater rivers and floating muskegs. Many people have seen them surface and know where these rivers run; even a Pentecostal preacher from Bigstone Cree Nation tells stories about having seen it. Dennis Noskiye, an avid hunter and trapper from Chipewyan Lake, told me that he had expressed concern for these creatures in a consultation meeting about Royal Dutch Shell's activities, referencing in particular a new 'de-watering' process where wetlands are drained so that bitumen is more easily extracted. The scientist present told him that underwater serpents were just superstition; Dennis refused to meet with them again. Many times during traditional land use assessments I have been tasked by First Nations with protecting rocks, sasquatch dens, and underwater nests. The only way I have been able to do this is by calling them spiritual or ceremonial sites, converting the knowledge being shared with me into the western paradigm to grant it 'authority' (Nadasdy 1999).

As our current political and economic systems privilege assessments derived from a Western perspective, the process of including traditional environmental knowledge in assessments has not served to elevate the status of Indigenous perspectives (Povinelli 1995: 115). Because even though Environmental Impact Assessments include traditional land use assessments, 'the evaluative apparatus of national or international economic policy has been little influenced by non-Western understandings of human-environmental relations' (115). So as multicultural or progressive as these policies may seem, they are little more than an extension of state authority expressed through the models and maps that consultants and researchers generate: 'This sleight of hand is achieved through court and legislative mandates that recognise the traditional rights of Aboriginal people and at the same time give state institutions the right to sort contemporary Aboriginal social and cultural practices into the traditional (valuable) and the untraditional (valueless)' (516). While the Canadian government expresses guilt for its past actions towards Aboriginal peoples and celebrates Indigenous traditions, Canada maintains control over lands and territories: 'It tells indigenous persons, "Your beliefs are absolutely essential to your economic well-being; your beliefs make no rational sense in the assessment of your economic well-being"' (Povinelli 1995: 516).

Traditional environmental knowledge in Canada is not actually being seriously considered in environmental decision making, as it is only viewed as being legitimate when

it has been ‘adapted to the specialized narrative of science’ (Ellis 2005: 72). Statements that support conventional environmental science are used to demonstrate the progressive bent of companies and the government, while at the same time knowledge that does not support Western-style decision making is dismissed. Cruikshank adds that the only way to learn from Indigenous narratives about life experiences, history, and traditions that ‘represent distinct and powerful bodies of local knowledge’ is to appreciate them as a whole instead of fragmenting them into data (259). Knowledge is being codified as ‘traditional environmental knowledge’ in order to meet the specific aims of North American management science, and local knowledge is transformed from the conceptualisation of sentient landscapes to ‘measurable commodities called “lands” and “resources”’ (259). Indigenous Peoples then face double exclusion: first through colonial processes that expropriate their land, and ultimately by neo-colonial discourses that appropriate and reformulate their ideas (259).

While living beings that are not recognised by scientists are an obvious example of how of Indigenous knowledge does not fit into the format or language expected of traditional land use assessments, sakâwiyiniwak relationships with *all* beings in the natural world defy a database or mitigation-style of reporting (Agrawal 2002):

When First Nations peoples make claims about animals as intelligent social beings, they get nowhere because government biologists and resource managers, regardless of their own personal beliefs or understandings, simply cannot implement management decisions based on such alternate conceptions of animals. (Nadasdy 2003: 8)

The idea that parts of a landscape are *resources*, rather than sentient beings that make up a landscape, marginalises sakâwiyiniwak knowledge as simply being *perspectives* that do not fit into a technical framework (Westman 2013: 118). For sakâwiyiniwak and more broadly-observed Cree systems of respect and reciprocity with the living world, they are not ‘perspectives’ but rather the logical extension of the realisation that the landscape is made up of interacting sentient beings.

Both Povinelli’s and Cruikshank’s descriptions of the tensions between sentient beings who listen to humans, and the colonial mechanisms that discredit or disbelieve Indigenous peoples’ relations and responsibilities with these beings, are reminiscent of the experiences of sakâwiyiniwak communities in Alberta’s oil sands region. First Nations knowledge holders are constantly being told that in order to be consulted on industrial developments in their traditional territories, they must share their traditional knowledge with the companies. But once communities do share their concerns, they are simply dismissed by companies and the government readily approves the projects (Baker & Westman 2018).

Why do we only entertain the idea the berries can listen once scientists prove it in a laboratory? Should not an Elder’s wisdom be proof enough? Routinely, stories about relatives with roots, rocks who leave trails across your front yard, and berries who listen are not considered useful in either the consultation or accommodation processes. This may well be due to the fact that were such things to be acknowledged, the landscapes and berries that listen could create real problems for those who desire the oil and minerals that lie beneath them. At the same time, the more research is undertaken

with teams of Elders and scientists, the more correlations between research findings and Elders' wisdom are revealed (Baker & Fort McKay Berry Group 2019). Tim Ingold suggests that 'animism' and science are not irreconcilable, but that science needs to be based in participation and observation, openness and engagement, and astonishment when observing the living world (2006: 19). His call for the re-animation of 'Western' thought is, in part, what I am suggesting here, based in the teachings of the 'PhDs of the bush': the Elders, who know how to survive off of the land through intricate systems of respect and reciprocity with all the sentient beings that make up a landscape, including berries that listen. Many of us are now considering what reconciliation means to us and how to do research, teaching, and writing in the spirit of reconciliation. I would like to propose that appreciating the ability of berries to listen be an example of what reconciliation can look like. What I mean is that we consider that berries and the other beings that animate the landscape can actually hear us. That we need to show respect and are careful with our words and behaviour while on the land. That we think in terms of reciprocity with one another and the berries.

Notes

1. We surveyed 80 community members to determine their top 20 preferred wild food items to have tested, and selected the top 10 items, sampling 10 of each category for a total of 100 samples. We then accepted 50 random samples that community members brought in, as selected by community-based monitors while in the field.
2. Here I am referring more broadly to the Cree Nations spread across Canada. With over 200,000 members it is one of the largest First Nations groups in North America.
3. Wild berries or fruit in sakaw nehiyawewin (Waugh 1998: 93).
4. The Cree culture hero and the object of many legends and tales (Waugh 1998: 231).

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References

- Adelson, Naomi. 2000. *'Being Alive Well': Health and the Politics of Cree Well-Being*. Toronto/Buffalo/London: University of Toronto Press.
- Agrawal, Anurag A. 2000. Communication Between Plants: the Time It's Real. *Trends in Ecology & Evolution*, 15(11):446.
- Agrawal, Arun. 2002. Indigenous Knowledge and the Politics of Classification. *International Social Science Journal*, 54(173):287–297.
- Alfred, Taiaiake. 2009. Colonialism and State Dependency. *Journal de la sante autochtone*, 5(2):42–60.
- Baker, Janelle M. 2016. Research as Reciprocity: Northern Cree Community-Based and Community-Engaged Research on Wild Food Contamination in Alberta's Oil Sands Region. *Engaged Scholar Journal: Community-Engaged Research, Teaching, and Learning*, 2(1):109–123.
- Baker, Janelle M. & Fort McKay Berry Group. 2019. Cranberries are Medicine: Monitoring, Sharing, and Consuming Cranberries in Fort McKay. In *Wisdom Engaged: Traditional Knowledge for Northern Community Well-Being*, edited by L.M. Johnson. Edmonton: University of Alberta Press.
- Baker, Janelle M. & Clinton N. Westman. 2018. Extracting Knowledge: Social Science, Environmental Impact Assessment, and Indigenous Consultation in the Oil Sands of Alberta, Canada. *The Extractive Industries and Society*, 5:144–153.
- Black Elk, Linda & Janelle Marie Baker. 2020. From Traplines to Pipelines: Oil Sands and Pollution of Berries and Sacred Lands From Northern Alberta to North Dakota. In *Indigenous Peoples' Land Rights and the Roles of Ethnobotany and Ethnobotany: Strategies for Canada's Future*, edited by N.J. Turner. Kingston: McGill-Queen's University Press.
- Brightman, Robert. 1993. *Grateful Prey: Rock Cree Human-Animal Relationships*. Berkeley and Los Angeles: University of California Press.
- Buffalo, K., C. E. Jones, J. C. Errington & M. I. A. MacLean. 2011. 'Fort McKay First Nation's Involvement in Reclamation of Alberta's Oil Sands Development' paper presented at Mine Closure Conference. Lake Louise, Alberta.
- Chamovitz, Daniel. 2012. *What a Plant Knows: A Field Guide to the Senses of Your Garden - and Beyond*. Oxford: Oneworld Publications.
- Cruikshank, Julie. 2005. *Do Glaciers Listen? Local Knowledge, Colonial Encounters, & Social Imagination*. Vancouver, BC: University of British Columbia Press.
- Cruikshank, Julie, Angela Sidney, Kitty Smith & Annie Ned. 1990. *Life Lived Like a Story*. Vancouver: UBC Press.
- Cuerrier, A., et al. 2015. Cultural Keystone Places: Conservation and Restoration in Cultural Landscapes. *Journal of Ethnobiology*, 35(3):427–448.
- Darnell, Regna. 1988. The Implications of Cree Interactional Etiquette. In *Native North American Interaction Patterns*, edited by Regna Darnell, 69–78. Ottawa: University of Ottawa Press.
- Darnell, Regna. 1990. 'Thirty-Nine Postulates of Plains Cree Conversation, "Power," and Interaction: A Culture-Specific Model'. Paper presented at 22nd Algonquian Conference, Carleton University. Chicago, 1990.
- Deur, Douglas. 2009. 'A Caretaker Responsibility': Revisiting Klamath and Modoc Traditions of Plant Community Management. *Journal of Ethnobiology*, 29(2):296–322.
- Dicke, Marcel, Anurag A. Agrawal & Jan Bruin. 2003. Plants Talk, but are They Deaf? *Trends in Plant Science*, 8:9.
- Dorion, Leah Marie. 2011. *Relatives With Roots: A Story About Métis Women's Connection to the Land*. Saskatoon: Gabriel Dumont Institute.
- Ellis, Stephen C. 2005. Meaningful Consideration? A Review of Traditional Knowledge in Environmental Decision Making. *Arctic*, 58(1):66–77.
- Feit, Harvey A. 2001. James Bay Crees' Life Projects and Politics: Histories of Place, Animal Partners and Enduring Relationships. In *In the Way of Development: Indigenous Peoples, Life Projects and Globalization*, edited by M. Blaser, H. Feit and G. McRae. London/Ottawa: Zed Books and the Canadian International Development Center.

- Feit, Harvey A. & Robert Beaulieu. 2001. Voices From a Disappearing Forest: Government, Corporate, and Cree Participatory Forestry Management Practices. In *Aboriginal Autonomy and Development in Northern Quebec and Labrador*, edited by C.H. Scott. Vancouver: UBC Press.
- Fortun, Kim. 2012. Ethnography in Late Industrialism. *Cultural Anthropology*, 27(3):446–464.
- Gagliano, Monica, et al. 2017. Tuned in: Plant Roots use Sound to Locate Water. *Oecologia*, 184:151–160.
- Garibaldi, Ann. 2009. Moving From Model to Application: Cultural Keystone Species and Reclamation in Fort McKay, Alberta. *Journal of Ethnobiology*, 29(2):323–338.
- Golzadeh, Nasrin, et al. 2020. Evaluating the Concentrations of Total Mercury, Methylmercury, Selenium, and Selenium:Mercury Molar Ratios in Traditional Foods of the Bigstone Cree in Alberta, Canada. *Chemosphere*, 250(126285):1–10.
- Government of Canada. 1899. Treaty No. 8 and Adhesions, Reports, Etc. In QS-0576-000-EE-A-16. IAND, ed. Ottawa: Queen's Printer and Controller of Stationery.
- Hallowell, Irving A. [1960] 2002. Ojibwa Ontology, Behavior, and World View. In *Readings in Indigenous Religions*, edited by G. Harvey. New York: Bloomsbury.
- Ingold, Tim. 2006. Rethinking the Animate, Reanimating Thought. *Ethnos*, 71(1):9–20.
- Kimmerer, Robin Wall. 2013. *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants*. Minneapolis Minnesota: Milkweed Editions.
- Kohn, Eduardo. 2013. *How Forest Think: Toward an Anthropology Beyond the Human*. Berkeley and Los Angeles: University of California Press.
- Landrigan, Philip J, et al. 2017. The Lancet Commission on Pollution and Health. *The Lancet*, 391(10119):1–51.
- LeCompte-Mastenbrook, Joyce Kelly. 2015. Restoring Coast Salish Foods and Landscapes: A More-than-Human Politics of Place, History and Becoming, Anthropology (Unpublished doctoral dissertation). University of Washington, Washington.
- Mancuso, Stefano & Alessandra Viola. 2015. *Brilliant Green: The Surprising History and Science of Plant Intelligence*. Washington: Island Press.
- Marles, Robin J, Christina Clavelle, Leslie Monteleone, Natalie Tays & Donna Burns. 2008. *Aboriginal Plant Use in Canada's Northwest Boreal Forest*. Edmonton, AB: Natural Resources Canada.
- McCormack, Patricia A. 2017. Walking the Land: Aboriginal Trails, Cultural Landscapes, and Archaeological Studies for Impact Assessment. *Archaeologies: Journal of the World Archaeological Congress*, 13(1):110–135.
- Michell, Herman J. 2009. Gathering Berries in Northern Contexts: A Woodlands Cree Metaphor for Community-Based Research. *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health*, 7(1):65–73.
- Murray, Gordon, Peter C. Boxall & Ross W. Wein. 2005. Distribution, Abundance, and Utilization of Wild Berries by the Gwich'in People in the Mackenzie River Delta Region. *Economic Botany*, 52(2):174–184.
- Myers, Natasha. 2015. Conversations on Plant Sensing: Notes From the Field. *NatureCulture*, 03:35–66.
- Nadasdy, Paul. 1999. The Politics of TEK: Power and the 'Integration' of Knowledge. *Arctic Anthropology*, 36(1/2):1–18.
- . 2003. *Hunters and Bureaucrats: Power, Knowledge, and Aboriginal-State Relations in the Southwest Yukon*. Vancouver, Toronto: UBC Press.
- Naxaxalhts'i, Albert (Sonny) McHalsie. 2007. We Have to Take Care of Everything That Belongs to Us.. In *Be of Good Mind: Essays on the Coast Salish*, edited by Bruce Granville Miller, 82–130. Vancouver: UBC Press.
- Nelson, Mark, David C. Natcher & Clifford G. Hickey. 2005. Social and Economic Barriers to Subsistence Harvesting in a Northern Alberta Aboriginal Community. *Anthropologica*, 47(2):289–301.
- Parlee, Brenda & Fikret Berkes. 2006. Indigenous Knowledge of Ecological Variability and Commons Management: A Case Study on Berry Harvesting From Northern Canada. *Human Ecology*, 34:515–528.

- Percy, Kevin E., D. G. Maynard & A. H. Legge. 2012. Applying the Forest Health Approach to Monitoring Boreal Ecosystems in the Athabasca Oil Sands Region. In *Alberta Oil Sands: Energy, Industry and the Environment*, edited by Kevin E. Percy, 193–218. Oxford: Elsevier.
- Poirier, Claire. 2011. Drawing Lines in the Museum: Plains Cree Ontology as Political Practice. *Anthropologica*, 53:291–303.
- Povinelli, Elizabeth A. 1995. Do Rocks Listen? The Cultural Politics of Apprehending Australian Aboriginal Labor. *American Anthropologist*, 97(3):505–518.
- . 2016. *Geontologies: A Requiem to Late Liberalism*. Durham/London: Duke University Press.
- Reder, Deanna. 2012. A Complex Web of Relations That Extends Beyond the Human. *Journal of Chinese Philosophy*, 39(4):507–517.
- Scott, Colin. 1986. Hunting Territories, Hunting Bosses and Communal Production among Coastal James Bay Cree. *Anthropologica*, 28(1/2):163–173.
- . 1989. Knowledge Construction among the Cree Hunters: Metaphors and Literal Understanding. *Journal de la Société des Américanistes*, 75:193–208.
- Scott, Colin. 1996. Science for the West, Myth for the Rest? The Case of James Bay Cree Knowledge Construction. In *Naked Science: Anthropological Inquiry into Boundaries, Power, and Knowledge*, edited by Laura Nader, 69–86. New York: Routledge.
- Scott, Colin. 2001. On Autonomy and Development. In *Aboriginal Autonomy and Development in Northern Quebec and Labrador*, edited by C.H. Scott. Vancouver: UBC Press.
- . 2005. Co-Management and the Politics of Aboriginal Consent to Resource Development: The Agreement Concerning a New Relationship Between Le Gouvernement du Quebec and the Crees of Quebec (2002). In *Canada: The State of the Federation 2003: Reconfiguring Aboriginal-State Relations*, edited by M. Murphy. Kingston: Institute of Intergovernmental Relations School of Policy Studies, Queens University.
- . 2006. Spirit and Practical Knowledge in the Person of the Bear among Wemindji Cree Hunters. *Ethnos*, 7(1):51–66.
- Tanner, Adrian. 1979. *Bringing Home Animals: Religious Ideology and Mode of Production of the Mistassini Cree Hunters*. Newfoundland: Memorial University.
- Thompson, Shirley. 2005. Sustainability and Vulnerability: Aboriginal Arctic Food Security in a Toxic World. In *Breaking Ice: Renewable Resource and Ocean Management in the Canadian North*, edited by Fikret Berkes, Rob Huebert, Helen Fast, Micheline Manseau, Alan Diduck, 47–68. Calgary, AB: University of Calgary Press.
- Thornton, Thomas F. 1999. Tleikw Aani, The 'Berried' Landscape: The Structure of Tlingit Edible Fruit Resources at Glacier Bay, Alaska. *Journal of Ethnobiology*, 19(1):27–48.
- Todd, Zoe. 2017. Fish, Kin, and Hope: Tending to Water Violations in Amiskwaciwāskahikan and Treaty Six Territory. *Afterall: A Journal of Art, Context and Inquiry*, 43(1):102–107.
- Trewavas, Anthony. 2005. Green Plants as Intelligent Organisms. *Trends in Plant Science*, 10(9):413–419.
- Tsing, Anna. 2005. *Friction: An Ethnography of Global Connection*. Princeton: Princeton University Press.
- Turner, Nancy. 2003. Passing on the News': Women's Work, Traditional Knowledge and Plant Resource Management in Indigenous Societies of North-western North America. In *Women & Plants: Gender Relations in Biodiversity Management and Conservation*, edited by Patricia L. Howard, 133–149. London: Zed Books.
- Turner, Nancy J. 2005. *The Earth's Blanket: Traditional Teachings for Sustainable Living*. Vancouver/Toronto: Douglas McIntyre.
- Watts, Vanessa. 2013. Indigenous Place-Thought & Agency Amongst Humans and Non-Humans (First Woman and Sky Woman go on a European World Tour!). *Decolonization: Indigeneity, Education & Society*, 2(1):20–34.
- Waugh, Earle (ed). 1998. *Alberta Elders' Cree Dictionary*. Edmonton: The University of Alberta Press and Duval House Publishing.

- Westman, Clint. 2013. Social Impact Assessment and the Anthropology of the Future in Canada's Tar Sands. *Human Organization*, 72(2):111–120.
- Westman, Clint & Christine Schreyer. 2014. *Inihiyawitwâw* 'They are Speaking Cree': Cree Language Use and Issues in Northern Alberta, Canada. *International Journal of the Sociology of Language*, 230:115–140.