Nurturing Hope Through Reciprocity: High Park's Black Oak Savannah

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Abstract

Climate change has become a mainstream concern with proposed solutions focusing on mitigating the impact of environmental degradation on human lives. I use Toronto's High Park as a case study to explore why an essential aspect of achieving profound and enduring environmental restoration involves recognizing the deep interconnectedness between human beings and what we commonly refer to as "nature". Indigenous peoples managed High Park's black oak savannah for thousands of years, using fire to maintain the savannah's open canopy and activate seeds. European colonization halted these burns, leading to most of the savannah being lost to closed-canopy forests and invasive plants; today, less than 0.5% of Ontario's black oak savannah remains. Amid despair, we rekindle our hope through prescribed burns, stewardship programs, and planting grasses and wildflowers with long-stand relationships with the land; we know that hope is a discipline where collective commitment and action are essential. Indigenous knowledge and storytelling remind us of our responsibility of reciprocity to the land and all our relations. We sow these seeds of hope and trust they will flourish and generate new life, much like ancestral seeds activated by fire.

Keywords: *environmental restoration; Indigenous ecological knowledge; reciprocity; interconnectedness*

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Introduction

It is early summer 2023, and after a few weeks of heat, Toronto's sky turned orange as smoke filled the streets and forced people indoors. As hundreds of fires raged across Canada, 4.8 million hectares of land have already burnt, tens of thousands of people have been evacuated, and the plume of smoke has travelled as far away as Norway (CIFFC, June 12, 2023; Forsetlund Solbakken, June 7, 2023). Between catastrophic floods, unprecedented wildfire seasons, and deadly heat waves, the rising frequency and severity of natural disasters in recent years has made climate change difficult to ignore. However, proposed solutions have largely focused on mitigating the effects of environmental degradation on human lives, leaving the notion of anthropocentrism unchallenged. Building upon Indigenous knowledge and methodologies, I argue that an essential aspect of achieving profound and enduring environmental restoration involves recognizing the deep interconnectedness between human beings and what we commonly refer to as "nature".

Environmental Restoration: Anthropocentrism, Storytelling, and Kinship

9:04 am. I turn on the morning news as I brew some coffee. I listen absently. The wildfires have made headlines for the past week and today is no different: *The fire is spreading, more people are evacuated, critical infrastructure is threatened, and property is lost. Close your windows, wear a well-fitted mask, the smoke is dangerous for your health*. It is not unlike other reports of natural disasters or climate change more generally: Human health, quality of life, and economic stability are at the forefront of concerns, and the proposed solutions to mitigate and prevent them equally short-sighted. Electric vehicles, carbon tax, and a ban on plastic bags are not sufficient. Environmental restoration strategies which do not account for the kinship between human beings and the more-than-human world are bound to fail. It is a breakdown in relationship that has led us here, and it is healing that relationship that will help us restore our environment (Atleo, 2011). This

might sound abstract at best: How can we possibly develop a *relationship* with the land? *After all, we are the most important species, possessing unique qualities that fundamentally differentiate us from all other beings. Our superiority endows us with the right to ab/use the more-than-human world for our own interests; the land is but another resource, not something you can develop a relationship with.* Or so does the dominant Western perspective tell us. We cut down trees and left vast areas of desolation with no regard to all the species that called that land home. We contaminated the rivers and drilled into the earth, planted single crops, and depleted the soil of nutrients. We bred and slaughtered non-human animals, stole the young from their mother and taught them tricks to entertain us. We justified exploitation by pointing to economic gains and prioritized our own comfort over the lives of others and of future generations.

But that is not the only way. Resulting from thousands of years of experience, Traditional Ecological Knowledge (TEK) views the land not as a resource to be extracted and exploited but as kin who sustains us (Cajete, 2000; Geniusz, 2009; McGregor, 2004). In turn, we foster a reciprocal relationship, expressing gratitude, seeking permission before taking, and taking only what is necessary (Kimmerer, 2013). To do so ensures the preservation and regeneration of the land and species with whom we share the world (Atleo, 2011; Cajete, 2000). Indigenous oral traditions, particularly storytelling, play a central role in the intergenerational transmission of this cultural and ecological knowledge and wisdom (Simpson, 2011, 2014). I want to share with you two stories which speak to interconnectedness, reciprocity, and greed.

The power of symbiotic relationships is illustrated by the Haudenosaunee story of the Three Sisters: corn, beans, and squash (Kimmerer, 2013). The corn, growing tall, provides a trellis for beans to climb. The beans fix nitrogen in the soil, promoting both her and her sisters' growth. Squash, meanwhile, extends its large leaves and provides ground cover, suppressing weeds and

retaining moisture, helping her kin. The Three Sisters teach us that reciprocity creates abundance and sustainability, not only in polyculture farming, but in our relationship with the land and each other.

At the same time, the breakdown in relationality, fueled by greed, is illustrated by the story of the Windigo (Kimmerer, 2013). The Windigo is a fearsome creature wandering the northern forests in search of human flesh. The more people he consumes, the more he grows, and the stronger his cravings become; his stomach always growing, the Windigo is never satisfied. This story served as a caution against cannibalism during times of famine when food was scarce and hunger prevalent. But the story of the Windigo is also a story about greed breeding greed, and in a time of massive exploitation and overconsumption, this story has never been more relevant.

Storytelling can be a tool to reclaim narratives and challenge dominant Western perspectives and can play an important role in education, decolonization, and healing. Kimmer (2013) explains: “Stories are gifts to be shared, ways of binding our intentions to the land, to the community, and to our own spirits.” (p. 38). Decolonizing our thinking requires acknowledging the interconnected nature of the world, moving away from the fragmentation caused by reductionist perspectives that isolate us from our environment (Battiste, 2013; Simpson, 2017).

In a world which places human beings at the centre and all rest as resource and property, understanding our interconnectedness to the land and all our relations can be difficult. These stories help to fill that gap. It is the same ingredients which nurture resilient relationships with our loved ones which are essential for developing a sense of interconnectedness with all that surrounds us: be present and connected. Listen intently and ask for permission before taking. Express gratitude for the gifts bestowed upon you and reciprocate them, because it is generosity and gratitude which nourish relationships.

Case Study: High Park, Black Oak Savannah, and Prescribed Burns

April 2022. It is a chilly Thursday morning in High Park as I warm my hands around a cup of tea. In the year that followed, together with others, I was taught about the land, the four sacred medicines, the marker trees, the tickle bees (Figure 5). I watched the eagles fly and the vulture circle the skies. I felt the fuzzy oak galls (Figure 1, 2) and the crumbly earthworm castings (Figure 3), abundant after rain. I drank sap from a broken birch and ran my fingers across bark scars left by lightening (Figure 4). I removed buckthorn and planted big bluestem, closed my eyes, and listened to the concert of bird songs. In what follows, I reflect on High Park's black oak savannah, from its geological formation to the importance and return of prescribed burns.

Figure 1: An oak gall. Wasps deposit their eggs into the leaf tissue, triggering an abnormal growth which provides a protective environment for wasp larvae to develop.

Figure 2: Oak galls can be fuzzy, smooth, or spiky.

Figure 3: Earthworm castings are nutrient-rich and highly beneficial for enhancing soil fertility, plant growth, and overall soil health.

Figure 4: Lightning scar on a tree bark. Lightening strikes cause localized damage and can lead to structural weakness.

The last ice age began 100,000 years ago, covering most of North America with ice three kilometers thick (Freeman, 2009; Karrow, Clark, & Terasmae, 1961). As the Laurentide Ice Sheet began to melt and retreat northward 12,500 years ago, Lake Iroquois was formed (Eyles, 2009). Today's High Park was submerged 50-60 meters underwater, forming Lake Iroquois' lakebed; if you look carefully, you might notice the sandy soil still present today (Figure 6). 300 years later, the St. Lawrence ice dam broke, and Lake Iroquois drained into the sea, leaving its former lakebed exposed, including the area on which High Park is situated today.

Figure 5: A "tickle bee" on the ground. They are gentle, solitary, ground-nesting bees that emerge in early spring. Thousands nest in High Park.

Figure 6: The sandy tunnel of a solitary bee in High Park. Instead of one large communal nest, each female bee digs their own. The sandy soil used to be Lake Iroquois' lakebed.

The first human beings began arriving in the area a thousand years later (11,000 years ago) (Williamson & MacDonald, 2009). As Lake Iroquois drained, it left behind smaller proglacial lakes, including Admirality Lake, which had a much lower shoreline than Lake Ontario. As hunters travelled and settled alongside the Admirality lakeshore, they left behind footprints and spearheads. The Wendat ("Huron") were one of the earliest known Indigenous nations to occupy the region, later joined by the Petun, both of which were in conflict with the Haudenousaunee ("Iroquois") over beaver hunting grounds. By the mid-17th century, the area had also become occupied by the Senecas, the Mississaugas, as well as early European colonizers (Williamson & MacDonald, 2009).

When Lake Iroquois drained, the sandy land it exposed developed several ecosystems (e.g., tundra, spruce forests, black oak woodlands and savannahs) and became inhabited by a variety of non-human animals (e.g., mammoths, caribou, bison), both supported by ravines and streams (Keefe, n.d.b). Savannahs are characterized by tall grasses, wildflowers, and a 25-35% tree cover; they can be thought of as a transitional zone between prairies (which are treeless) and woodlands

(which have a 35-60% canopy cover) (Toronto and Region Conservation Authority, 2019). Offering both shade and full sun, savannahs attract a diversity of plants, small animals, birds, and insects. Indigenous peoples maintained Toronto's black oak savannah through fire for more than 5,000 years. While today fire is largely seen as a destructive force, fire plays a crucial role in preserving the savannah ecosystem, ensuring its resilience, and promoting biodiversity (Toronto and Region Conservation Authority, 2019). The fires control invasive species and ensure an open canopy. Germination and growth are also stimulated by fires, which nourish the soil by releasing nitrogen and blackening the soil, allowing it to absorb more heat from the sun (Geniusz, 2009). This process benefits plants with long-standing relationships to the land which have adapted to fire such as oak trees with thick fire-resistant bark and tallgrasses with roots as long as 12ft, allowing them to grow more vigorously in the post-burn period (Myers, 2017).

When European colonizers began arriving in the 17th century, Toronto's black oak savannah was a vast ecosystem, extending from what is today Royal York Rd. (west) to Roncevalles Ave. (east), and from Lake Ontario (south) to Lawrence Ave. (north) (Keefe, n.d.a). The fires were suppressed, being seen as a threat to both 'nature' and European settlements. In 1836, John and Jemima Howard purchased 165 acres (Lake Ontario up to Bloor St.) and built Colborne Lodge, calling their estate 'High Park' (Bain, 2009). In 1873, the Howards donated 120 acres of their estate to the City of Toronto on three conditions: that it be kept in its natural state, that it retains the name 'High Park', and finally, that it remains free for all, forever[1]. The suppression of fires, introduction of non-native plants, and rampant trampling led to the loss of a range of species and plants. Today, only 13 acres of High Park remain a savannah ecosystem (Toronto and Region

[1] Upon the Howards' death, the remaining 45 acres were also acquired by the city. Today's High Park spans 400 acres, including the 165 acres acquired from the Howards, 172 acres (to the east) purchased from the Ridouts, 71 acres (to the west) from the Chapman (Ellis) estate, and 2 acres from the Village of Swansea (Colborne Lodge, Toronto Cultural Services, n.d.). 11 acres on the southern edge were lost in 1972 to the construction of the Queensway.

Conservation Authority, 2019). The savannah that extended past High Park was lost to roads, buildings, and tons of concrete. Today, less than 0.5% of Ontario's black oak savannah remains (Doiron, 2023).

Prescribed burns were reintroduced to High Park in the late 1990s by the City of Toronto Urban Forestry and have since been an almost annual occurrence (Toronto and Region Conservation Authority, 2019). Along with Canada hawkweed and prairie grasses, the wild lupine (Figure 7, 8) responded particularly well to prescribed burns. Once common in the black oak savannah of southern Ontario, the return of the fires helped increase its size and number of seeds. It is hoped that the restoration of the wild blue lupines will return the Karner blue butterfly, which feeds exclusively on wild blue lupine and was last seen in High Park in 1926.

Figure 7: Wild blue lupine in its early stages of growth, displaying a cluster of basal leaves with a fuzzy texture.

Figure 8: Wild blue lupine in fully bloom, displaying upright stems with elongated racemes of blue-purple flowers.

Methodological Framework: Indigenous Knowledge and Storytelling

As I explored our kinship with the land and all our relations, I am guided by Indigenous methodologies, whose holistic lens informs how I understand and build connections with the world around me in ways that extend beyond the confines of conventional academic discourse.

'Lilyology', introduced by Nerida Blair (2019), has been a useful metaphorical, symbolic, and decolonizing framework for reflecting on the interconnectedness nature of the world (Phillips, 2023). At the core of Western thought, lies a strong belief in empirical objectivity, primarily anchored in the scientific method, individual expertise, linearity, and the written word as its trusted sources of 'truth'. Yet in this quest for a single, linear, and universally 'right' answer, Western thought too often fails to account for the multifaceted, layered dimensions of knowledge. Blair (2019) illustrates this as a brick wall: Academic disciplines, stacked and separated from each other, form a border between 'legitimate' knowledge and other(ed) ways of knowing.

In contrast to Western academic paradigms, Indigenous knowledge systems are deeply rooted in specific cultural and ecological contexts. They incorporate a deep connection to the land, which is interwoven with practical knowledge guiding ethical and sustainable practices (e.g., TEK). Unlike Western knowledge, Indigenous knowledge systems are neither the property of individuals, nor primarily held in written form. Rather, they are a shared resource, often shared by Elders through stories, songs, rituals, and experiential learning. They are intricately interwoven into the collective memory of communities and the land that sustains them. These oral traditions challenge dominant Western paradigms by underscoring their iterative, non-linear nature; diverse narratives can and do coexist without conflicting with each other (De Santolo, 2019; Blair, 2019). Stories are vehicles for transmitting knowledge, wisdom, values, and traditions, providing a gradual accumulation of knowledge through repetition, layers, and connection with Elders (Blair, 2019). In her words, "[t]he storys [sic] are told in a circular or spiral theme, with each thematic repetition or spiral adding a little" (Blair, 2019, p. 213).

Returning to Blair's (2019) analogy, water lilies weave a tale of interconnectedness: Beneath the surface, their existence hinges on rhizomatous tendrils that intertwine, creating a

hidden network of unity. These rhizomes anchor the plants and serve as conduits for sharing resources among neighbouring lilies, fostering resilience and vitality. As they stretch toward the sun-dappled surface, their floating leaves offer sanctuary to a multitude of life forms, from small fish to darting insects; within the shade and shelter of lily pads, a web of interactions unfolds. Pollinators like bees and beetles flit from one water lily flower to another, choreographing an intricate dance of cross-pollination. As the blooms fade, seeds encased in buoyant pods fall into the water, borne away by the gentle currents to germinate and carry the legacy of their ancestors to new corners. In this narrative of interconnected existence, water lilies emerge as not just solitary flora but as integral actors in their ecosystem, where their rhizomes, resource-sharing, and ecological collaborations contribute to its thriving aquatic biodiversity. In this analogy, water lilies and Indigenous worldviews converge to reveal a narrative of profound interconnectedness, relationality, and reciprocity, where every element is connected and dependent on each other for growth and sustenance (Blair, 2019). These lilies, like us, flourish not in isolation but within a web of relationships, where each part contributes to the whole.

Towards reconnecting with the land and ourselves

In early lockdown, amid chaos and death, we hoped the COVID-19 crisis would serve as a turning point towards a better future. Reports of wildlife adventuring in eerily quiet city streets emerged, and we took it as a sign of hope for environmental sustainability (Luca, 2020; BBC News, 2020; The Guardian, 2020). At the same time, fake news, along with memes of dinosaurs and furbies (robot pet toys) 'returning' to cities and forests emerged, with hashtags #NatureIsHealing and #WeAreTheVirus (Horror, 2020; St Peter, 2020). In all cases, widespread speculation that the absence of human activity would lead to an environmental reset continued; we could take humans out of 'nature', and 'nature' would be better for it.

To conclude, I argue that an essential aspect of achieving sustainable environmental restoration is not removing humans from 'nature', but recognizing the deep interconnectedness between us, along with the responsibility of reciprocity it involves (Myers, 2018; Wilson, 2008). Healing our relationship with the land takes time, patience, and intention. Plant a garden. Engage all your senses. Introduce yourself to a tree. Reflect on your beliefs about yourself, those around you, and the land that sustains you. Individual reconnection with the land will not stop industries from dumping toxic waste in our water streams, nor big corporations from being the largest contributors to climate change – that much is true. But it is only by healing our relationship with the more-than-human world that change will endure; without it, policies fighting climate change will lead to little more than greenwashing. We can rekindle hope through relationality, reciprocity, and collective commitment and action. Let us sow these seeds of hope and trust they will flourish and generate new life, much like ancestral seeds activated by fire.

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