Small Acts of Care Toward Waste, Weeds, and Wastelands: An Arts-Based Method for Decolonizing Settler Relationship with Land and Tending to Livable Futures

by

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Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.

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Abstract

This thesis develops a way of confronting current ecological and social crises by working to decolonize settler relationship with Indigenous land through arts-based methods of engaging in small acts of care. A settler living in unceded Mi'kma'ki (the traditional territories of the Mi'kmaw people, colonially known as Nova Scotia, Canada), the author demonstrates that one way to do this is to learn from land and traditional Mi'kmaw knowledge, be responsible to treaty obligations, and make kin with more-than-human relatives. Through a creative and emergent practice, this research explores alternate ways of relating with the more-than-human living world from the destructive roles prescribed by capitalism and colonialism. It does this in three sites of research-creation by performing small acts of care that contribute to building livable multi-species futures from ruins of the Anthropocene present.

Plastic marine debris items are understood as artifacts that situate the Anthropocene within the expanses of deep time from which the material emerges and into which it will persist. Understanding plastics as unavoidable and abundant in any possible future worlds, this work explores creative possibilities for attending to these necessary collaborators in building livable futures. Knotweed, a plant capable of breaking through pavement and so invasive that it resists most attempts at its eradication, is considered as a potential resource and collaborator in learning how to act less aggressively on Indigenous land. And in the wasteland of a former forest turned clearcut and then bulldozed and blasted, a creative practice of paying attention to layers of change, remembering that which is being lost, and enacting care in seemingly hopeless situations is a way of mending relationships that form the life-supporting web of the living world.

These three iterations of care toward waste, weeds, and wastelands find that decolonizing settler relationship with land and contributing to building livable futures requires an ongoing and emergent practice. They find that there is no end to ways in which creativity is vital to the task of using Anthropocene ruins as the materials with which to mend tears in the fabric of the living world.

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Chapter 1: Introduction

1.1: Introduction

In the current global state of climate crisis and mass extinction, creative practices in the arts play a vital role in imagining and building livable presents and futures from the ruins of the so-called Anthropocene. Facing such enormous global crises requires input and collaboration from all directions, and the creative arts, especially when informed by land-based knowledges, offer a space for a deep reimagining of human roles in multi-species life-sustaining community. Amongst the devastation and unravelling in the web of life, many land-based artists are developing creative ways of enacting care and mending tears in multi-species relationship as a way toward viable post-Anthropocene futures. As one such artist living as a settler of mixed European descent in Mi'kma'ki, I inherit many treaty obligations including to decolonize my relationship to land and the interdependent web of the more-than-human world. Through a practice of research-creation rooted in creative inquiry and treaty responsibilities, I work to develop a settler practice of decolonizing relationship with land through small acts of care. I work toward finding ways to take settler responsibility for capitalist and colonial detritus by working with waste and excess such as marine debris plastics and invasive plants and by engaging with landscapes of destruction. Working with the tensions involved in decolonizing and deepening settler relationship to Indigenous land, this land-based art practice uses waste as the material from which to form the threads for mending through gestures of care in more-than-human community that work toward building habitable, multi-species presents and futures.

Amidst all of the ecological crises, Indigenous peoples around the world are cultivating a resurgence in traditional land-based skills and knowledges that repair relationship in multi-species webs of community (Moreton-Robinson, 2003; Simpson, 2016; Simpson, 2017). While settlers are in no way central to this, settlers do have a role to play in connecting with and supporting such movements of resurgence and decolonizing our own relationships, knowledge, and behaviour (Simpson, 2014). Non-Indigenous people have a responsibility to fulfill the obligations established by various treaties depending on where they live, and to recognize the knowledge embedded in various and local Indigenous cosmologies and place-based understandings of multi-species interdependency. In response to calls to indigenize the Anthropocene without appropriating Indigenous knowledges, along with Adams (2021), I work to follow suggestions outlined by Métis/otipemisiw scholar Zoe Todd (2016) and others to learn from Mi'kmaw knowledge holders, follow Indigenous scholarship, cite Indigenous authors, and avoid generalizing and homogenizing Indigenous perspectives. By working to uphold treaty in Mi'kma'ki where I live and work, I take on the settler task of learning from land-based Mi'kmaw knowledges that are rooted in millennia of reciprocal relationship with land, and in doing so, work to decolonize my own land-based knowledges and relationships.

In order to decolonize my engagement with land-based work, I first situate myself and reflexively examine the resulting epistemological implications. As a white settler of Scottish and Irish descent living in unceded Mi'kma'ki, I am a beneficiary of generations of colonial violence and theft of land and resources and the continuing colonial systems that facilitate settler access to land. My Scottish ancestors are among those responsible for the colonization of much of Mi'kma'ki, to form what is currently called Nova Scotia

(Latin for “New Scotland”). In addition to the privilege afforded to me by dominant narratives of whiteness and belonging on land across Turtle Island, I also sometimes have the privilege of an assumed sort of “nativeness” to so-called Nova Scotia that comes with a Scottish last name (even though I grew up in Ontario). This assumed belonging contributes to my ability to access land that allows me to carry out land-based work, regardless of whether I “own” land in the colonial system of land division and ownership. While not all settlers in Mi’kma’ki are white or of European descent (Byrd, 2019; Phung, 2015), in this thesis I focus primarily on settler colonialism as a system that intersects with white supremacy with the aim of working toward understanding my own settler responsibility from a position of white privilege.

My engagement with land involves both the privilege of access and the associated responsibility to uphold treaties. In Mi’kma’ki, where I live as a settler, numerous Peace and Friendship Treaties were signed in the eighteenth century between the Mi’kmaq and the British crown. These did not deal with the surrender of any land, but rather, as per their name, they were about maintaining peace and friendship through an agreement to live alongside each other and refrain from interfering with one another’s ways of life (Augustine, 2020; Battiste, 2016; Palmater, 2016, 32; Wallace, 2018). Despite these treaties, Mi’kmaq livelihoods have been and continue to be threatened by colonial control of land that restricts and denies Mi’kmaq access to land through the establishment of land ownership and disruption or destruction of the balance of ecosystems (Battiste, 2016, 1; Palmater, 2016, 34). All of this continues to function to deny Mi’kmaq ability to carry out land-based practices, skills, and relationships, and to make land available to European settlers and capitalist exploitation. In this thesis, “settler responsibility” therefore refers to the responsibility that settlers, especially those of European descent such as myself, have

to upholding treaty that accompanies the privilege of living in Mi'kma'ki and on Turtle Island.

Because the land where I live and work has been deeply altered by colonialism, so too is the knowledge that I learn from land. Without being rooted in generations through millennia of Mi'kmaw land-based knowledge, I have a limited frame of reference for recognizing some of ways in which colonialism and capitalist resource extraction have drastically altered ecosystems and land. Rather, my upbringing in Anishinaabe Algonquin territory (Ottawa, Ontario) was rooted in Canadian settler society with the perspective of Canada as a peaceful and peace-keeping nation of which to be proud, with minimal awareness about the existence of Indigenous peoples and no awareness of Canada's genocidal colonial history. Growing up in this context, all of my land-based knowledge was shaped by western science and colonial narratives that perpetuated the erasure of Indigenous peoples and naturalized settler presence and entitlement to land in so-called Canada. Despite my land-based knowledge being shaped in this way, I was greatly privileged in my upbringing with access to Anishinaabe Algonquin land that afforded me some land-based knowledge and skills. I was privileged to have parents who taught me to care about environmental issues, and taught me land-based skills, such as how to paddle a canoe or safely climb a tree.

Following the example of Sinopoulos-Lloyd & Sinopoulos-Lloyd (2020), I situate myself in lineages of knowledge which I have inherited in order to acknowledge how they have shaped my perceptions of the world. After being raised with the aforementioned white-washed narrative of a benign settler colonial Canada, it was in the context of feminist community organizations and university education in the humanities and social sciences on Anishinaabe Algonquin territory (Ottawa, Ontario) that I began to learn about

intersectional structures of oppression and the need to care for each other through collaboration and solidarity in political action. In Mi'kma'ki I continued to learn in the context of university education and community environmental organizations about the intersecting systems of oppression with ecological destruction, and have benefited from learning from the work of Mi'kmaw land protectors and knowledge holders (such as Bartlett, Marshall, & Marshall, 2012; Doucette & Hache, 2021; Hurley & Jackson, 2020; Marshall, 2010; Marshall & LeFort, 2020; McMillan & Prosper, 2016; M'sit No'kmaq et al., 2021; Palmater, 2016; Prosper et al., 2011; Robinson, 2014, and more). My lineages of knowledge include the work of various Indigenous folks, people of colour, and the work of other queer, femme, disabled, and/or neurodivergent land-based artists, writers, and activists who work with the challenges of living in a climate emergency and mass extinction event (such as Berne & Raditz, 2020; Kafer, 2013; LeBel, 2020; Lee, 2016; Piepzna-Samarasinha, 2018; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020; and many more). I have had the privilege of learning how to kayak through courses offered by Paddle Canada, a settler organization that structures courses that teach land-based skills and knowledge of Inuit and other Indigenous origins. I have had the privilege of learning from land and water, and the resulting acquisition of land-based skills supports even further access to land. I owe my knowledge to all of these, as well as to specific entities from whom I have learned. I owe my knowledge to the wilds of two suburban backyards, to the waters of the Ottawa River, to steep rocky rambling hills and lakes, and to insistent weedy growth in the cracks of urban decay, in Ottawa, Bristol, and Gatineau, all on Anishinaabe Algonquin territory. I owe more of my knowledge to land in Mi'kma'ki—to sandy beaches, rocky shorelines, and scattered islands of Egg Piktuk, Sipekne'katik, and Eskikewa'kik (Melmerby Beach, Prospect, and Eastern Shore, 100 Wild Islands and

beyond) to interconnected lakes and stillwaters and bogs on the edge of urban sprawl, and to a young forest regenerating post-forest-fire near Kjipuktuk (Birch Cove Lakes and Purcell's Cove backlands). I have and continue to learn all of this from a place of great privilege as a settler, and in the context of living during Anthropocene precariousness and loss.

1.2: "Anthropocene"

The current moment of anthropogenic climate change and mass extinction has been proposed as a new geological epoch called the Anthropocene (Anthropocene Working Group, 2019; Crutzen & Steffen, 2003), and has become widely used across multiple disciplines (Demos, 2017a, 11; Maslin & Lewis, 2015, 113-114). The term "Anthropocene" calls us to contend with the magnitude of colonial and capitalist human activities, and for this to be a catalyst towards environmental justice (Davis & Turpin, 2015, 6-7; Zylinska, 2014). But destructiveness is not an inherently human characteristic—rather, this new epoch results specifically from the white supremacist capitalist system that colonizes lands and peoples in order to exploit resources and labour for profit (Davis & Todd, 2017). Further, not all humans are equally to blame, as the benefits and detriments of these systems travel along striations of privilege and oppression to be unevenly distributed in patterns of environmental racism and waste colonialism (Liboiron 2018b; Waldron 2018). The term has been further problematized for being anthropocentric and implying that humans are in control, when, to the contrary, this epoch is actually marked by human disempowerment and lack of control over changes in global conditions through processes that we will never fully understand (Alaimo, 2016, 156; Bubandt, 2017, G124; Head, 2016, 5; Reno, 2015, 566).

A variety of alternate terms have been suggested, such as “Plantationocene” to describe an epoch in which richly diverse and sustainable ecosystems were replaced with monoculture plantations (Haraway, 2015, 159; Haraway, 2016, 99), or “Capitalocene,” to names the epoch after the exploitative and destructive effects of capitalism (Haraway, 2015, 160; Malm, 2013; Moore, 2015). Naming white-supremacy and widespread European colonization as the root cause of the current crisis, it has also been called the “Eurocene” (Grove, 2016) and the “White Supremacy Scene” (Mirzoeff, 2016), and, for a variety of reasons, it has been called the “Anthrobscene” (Parikka, 2015). But despite its problems, following Gan et al. (2017), Davis & Todd (2017), Head (2016), and others, I continue to use the term “Anthropocene,” partly because of its wide usage and recognition, but also because it is a term that generates useful and important dialogue through its political implications. Likewise, through my use of the term I aim to resist homogenizing all of humanity into one monolithic characterization. Through clarity about the structures of capitalism and colonialism that are the cause of the problem, I aim to more effectively contribute to moving toward whatever alternative worlds might come after. It has been proposed that the Anthropocene is more of a boundary event than an epoch, and, as Haraway (2015) argues, we must aim to move past it as quickly as possible (160). Regardless of what we name this time of climate crisis and mass extinction or how exactly we delineate its temporal boundaries, its challenges urgently demand our attention.

1.3: Anthropocene Challenges

1.3.1: *Complicity*

One of the many Anthropocene challenges is to contend with how to resist its causes while most likely still being entangled and participating in its structures. Living in a western colonial capitalist society, it is nearly impossible to remove ourselves from the exploitative and destructive systems in which we are embroiled. While efforts at reducing personal impact are indeed important and worthwhile, they do not address the systemic and structural causes of the problem. As Demos (2017a) explains, focusing on consumer participation in the oil economy as the problem distracts from "the fact of corporate petrocapitalism's enormous economic influence on global politics that keeps us all locked in its clutches" (64). This might cause one to reason that it is therefore futile to try to make changes on an individual or local level because individuals are not the root of the problem. But rather than feeling defeated by the individual need to buy gas to drive to the store to buy groceries that were grown somewhere else, understanding the root of the problem to be at the corporate rather than individual level can also open up space for imagining possible ways to engage. As Nishnaabeg scholar Leanne Betasamosake Simpson (2014) explains, survival depends upon being able to enact "local economic alternatives to capitalism" (23). Being complicit in the capitalist system does not preclude taking action to imagine and implement something different, nor does the smallness of personal actions make them irrelevant. Rather, for settlers and for those with any other kind of privilege resulting from the uneven distribution of wealth and harms in the petrocapitalist system, working in the tensions of entanglement in the system can show where there are opportunities for imagining and implementing alternatives. What is

important in these sorts of efforts is the learning, re-learning, cultivation, and decolonization of land-based and place-based knowledges and skills that decrease dependence on capitalist infrastructure and move towards healing and expanding human and more-than-human communities of connection and mutual support. This requires a deepened understanding of the interconnectedness of the "more-than-human" world, which is defined as not just the living or animate plants and animals, but also the material and physical processes and systems that form these connections (Abram, 1996; Whatmore, 2002).

1.3.2: *Challenges for Settlers on Indigenous Land*

A challenge for settlers such as myself living on unceded Indigenous land is to decolonize knowledge about land and instead learn from land, in order to form relationships of what Sinopoulos-Lloyd and Sinopoulos-Lloyd (2020) call "unsettled belonging" with the more-than-human world. This involves, as Robin Wall Kimmerer, (2013), member of the Citizen Potawatomi Nation, explains, being attentive to and learning from plants in order to shift behaviour to be less like invasive species and more like species who are introduced but do not invade or displace native plants, rather finding a more "naturalized," collaborative place to live in local ecosystems (214). Just like other invasive species, settler colonial invasion has and continues to take over and displace richly diverse Indigenous multi-species and life-sustaining communities, replacing them with monocultures and plants and animals that outcompete or are otherwise inhospitable to Indigenous species. Belonging, Sinopoulos-Lloyd and Sinopoulos-Lloyd (2020) explain, is not about "owning" land in the colonial system of land ownership, nor is it about growing up in a certain place or staying in one place for a long time. Rather, they

explain, it is "about being embedded within webs of accountability with other beings … in ways that cultivate resilience within a community" (2). For settlers, this is the challenge to cultivate deeper relationship with land and belonging in more-than-human community while also unsettling settler colonial entitlement to land (Moreton-Robinson, 2003). As Sinopoulos-Lloyd and Sinopoulos-Lloyd further explain, this kind of belonging can be "subversive and threatening to capitalism, white supremacy, cisheteropatriarchy … because one of the primary weapons of these power systems is displacement and dispossession of land" (3). In the chapters that follow, I take up this ongoing challenge to cultivate an unsettled settler belonging by paying close attention and exploring creative ways to enact care on land and in more-than-human community in Mi'kma'ki.

1.3.3: *Living with Loss and Grief*

Living in the so-called Anthropocene also presents the challenge of working with and through the immense sense of loss that percolates through the whole of the living world as ecosystems collapse in an avalanche of extinctions. As species fall away from the interconnected web of life, the holes and gaps in life-sustaining ecosystems and collaborations grow larger, causing more species to slip through, in an increasing process of unravelling, or what Rose (2017) calls "extinction cascades" (G52). Despite the accomplishments of enormous and widespread collective movements of resistance, the systems that are accelerating the demise of so much of the living world continue. In light of disastrous and catastrophic possible future outcomes, and considering that the planet is most likely beyond the point at which there is any possibility that currently unfolding crises can be stopped (Bendell, 2018), it can be difficult to maintain a sense of hope for the future. But, given the possibility that some life will survive amongst the ruins of oil-

dependent capitalist structures, the challenge is to find and nurture small bits of hope in places where life still hangs on (Kirksey et al., 2013). The challenge is to learn from plants and animals who adapt and survive in blasted landscapes and capitalist ruins, and to build places for hope to live (Kirksey et al., 2013; Tsing, 2015). The challenge is to remember that, even amidst all of the loss, in the unknown of the future is space for imagining hopeful scenes of survival.

1.4: Purpose and Focus

1.4.1: *Decolonizing Settler Relationship to Land*

In response to these challenges, in this project I take up the goal of decolonizing my own relationship with land as a settler living in unceded Mi'kma'ki through an ongoing creative practice aimed at learning how to live in accordance with the Peace and Friendship Treaties. The concept of decolonization is rooted in understanding that, while colonialism has had vast irreversible effects on lives, communities, ecosystems, and land, there is still much important work to be done toward unlearning colonial perspectives and working toward undoing or healing some colonial damage. Rather than aiming for some idealized imagined state of undoing colonialism (LaRocque, 2010), decolonization is the ongoing practice of working toward healing some of these harms and supporting Indigenous resurgence.

Beyond being an obligation and a privilege, settler engagement with treaty is also vital to acting in ways that protect the integrity and survival of the living world (Battiste, 2016; Garnett et al., 2018). Upholding treaties and doing the work of decolonizing, Clare Land (2011) explains, is not just "about 'helping' or 'do-gooder things'" (56). Rather, it is

about deciding whether the current system of capitalism and colonialism (Koshy et al., 2022) is the kind of world that we actually want to live in, and if not, then taking action to make change (Land, 2011). As Leanne Betasamosake Simpson, a Michi Saagiig Nishnaabeg scholar, writer, and artist, explains supporting Indigenous resurgence and being responsible to treaty is a way of "working together toward a radical alternative present," and "imagining … ways out of domination" (2017, n.p.). I was raised in and am entrenched in a settler society that relates to land through the human exceptionalist perspective of objectification of the rest of the living world. It is therefore an ongoing task to learn to relate with land and more-than-human relatives instead with respect, gratitude, and reciprocity. Through creative and embodied exploration on the land, this project takes up the challenge of identifying the ways in which my own behaviour and relationships have been shaped by settler colonialism. It then works to develop a practice of being responsible to more-than-human relatives in sites of colonial disturbance, destruction, waste, and neglect.

1.4.2: *Curiosity and Paying Attention*

The foundation of a practice aimed at cultivating relationship is a commitment to paying attention. This includes noticing where and to whom we give the honour of our attention, in resistance to the economy of attention that pulls us away from the living world, distracting us from what matters (McKibben, 2005; Odell, 2019). (How is it that, without even trying, I can recognize and identify more logos of companies whose products I don't even consume than the living beings right outside my door with whom I have lived in close proximity for years, plants and lichens and birds and insects?) Without awareness of the living world, there is no ability to recognize or understand when

something changes or someone is missing. As Bill McKibben writes, "since the context is the natural world that more and more of us have forgotten how to read, the changes seem small" (2005, n.p.). The inability to recognize sometimes even drastic changes in the more-than-human world has been called "shifting baseline syndrome" (Gan et al., 2017, G6; Matthews, 2017; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020, n.p.). In resistance to this shifting baseline, working to focus attention on the living world brings us into relationship and into awareness of changes that are happening in the webs of interdependencies. By intentionally practicing curiosity about and wonder at the more-than-human world, I move to decolonize my attention away from the capitalist economy and turn instead toward what matters: relationships that form the fabric of the more-than-human living world. How and where and to whom we pay attention shapes knowledge, which then shapes what and whom we care about, and how. Seeing the ways in which the effects of waste and extinction reverberate outwards through the living web, I look for ways in which care and healing can also move outward through webs of relationship.

1.4.3: *Creativity, Imagination, Building Livable Futures*

There is no reversing much of the destruction and the continuing-to-unfold effects of what has already been done. Species cannot be brought back from extinction, blasted landscapes cannot be un-blasted, and oil and plastics and other pollutants cannot be completely removed from land or sea. What we have to work with now are the blasted and polluted landscapes, the loss of wildlife and biodiversity in continuously unravelling ecosystems, invasive species of plants and animals out-competing Indigenous species, and an ocean full of plastic and microplastics that have infiltrated water, sediments, and bodies. Because there is no going back, there is no clear roadmap for a way forward. As

many others have argued, what is needed for moving toward possible habitable futures is a creative reimagining, rooted in Indigenous land-based knowledge that is specific to place, and in the knowledges of those who have already survived various apocalypses (Berne & Raditz, 2020; Coulthard, 2014, 156; Kafer, 2013, 23, 131; LeBel, 2020; Lee, 2016; Piepzna-Samarasinha, 2018; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020; Whyte, 2018, 226). After first imagining potential future life-supporting collaborations for habitable and decolonial post-Anthropocene worlds, the task is then to build those worlds from the ruins and waste of capitalism (Demos, 2017b, n.p.). Learning from and working with the physical properties, behaviour, and liveliness of matter—or, material agency (Alaimo, 2016; Bennett, 2010; Chen, 2012) —of these ruins and waste materials can lead to unexpected creative collaborations.

In the face of such enormous global crises, there are widespread calls for all disciplines of the arts to harness all creative energies toward imagining and creating livable alternatives to the current system that is speeding the planet toward ruin. Heather Davis (2017) writes that we need "images of the future beyond capitalism, beyond white supremacy, beyond colonialism; images of a future where social and ecological justice are intertwined" (16). T. J. Demos (2016) argues that art "holds the promise of initiating exactly these kinds of creative … shifts" that are needed, by "offering new ways of comprehending … our relation to the world differently than the destructive traditions of colonizing nature" (19). In a world where it often seems impossible to imagine the end of capitalism (Fisher, 2009), artists and creatives of all kinds are called upon to collaboratively imagine alternatives to the current system, and to perform these possibilities into being. The focus of this project is to heed and be a part of these calls for

creative reimagining toward alternative survivable worlds, from my position as a settler with generations of inherited privilege living in unceded Mi'kma'ki.

1.5: Anthropocene Ecologies

The theoretical framework informing this work is what Lorenz-Meyer et al. (2015) have called "Anthropocene ecologies," which include perspectives from various lineages of ecotheory that inform understandings of the Anthropocene present. This primarily includes strains of ecocriticism based in critical theories of intersectional power structures that understand late capitalism and its anthropocentrism to be the root cause of the present global state of ecological crises (Lorenz-Meyer et al., 2015). Like many others, including Iako'tsi:rareh Amanda Lickers (qtd. in Women's Earth Alliance, 2016), and Adamson et al. (2002), I recognize that the intersecting oppressive systems of racism, colonialism, sexism, ablism, classism, homophobia, and transphobia are what underpin destructive western capitalist colonial relationships with the rest of the living world. Therefore, also like these others, my use of Anthropocene-informed ecotheory holds that contending with these intersecting structures is central to addressing current ecological crises.

Key to these oppressive structures that are destructive to the living world are colonial systems that treat the more-than-human world as material resources available for exploitation instead of as relatives in the web of life with whom we are interdependent. It follows that settlers who aim to decolonize knowledge and relationships with land must learn from Indigenous land-based and specific place-based knowledges, including decolonial scholarship, Indigenous cosmologies, and, for myself, as a settler working in unceded Mi'kma'ki, Mi'kmaw place-based knowledges. While the wide variety and

differences between Indigenous nations mean that there too is a wide variety of knowledges, a common theme among many is attending to more-than-human relatives with care and respect through maintaining reciprocal relationship. Robin Wall Kimmerer, member of the Citizen Potawatomi Nation, explains what she calls the "honorable harvest" as a collection of principles outlining non-exploitative harvesting practices that are generally similar across various Indigenous nations on Turtle Island (2013, 183). In the projects that form this thesis work, I take up Kimmerer's (2013) call for settlers to learn and practice these principles as a way to work toward decolonizing my own relationship with land.

This work is informed by critical theory about how intersecting systems of oppression underpin and maintain ecologically destructive systems (Crenshaw, 1989). These systems function to move wealth and environmental harms in opposite directions along striations of power and privilege to disproportionately channel wealth towards white, western, settler societies and individuals, and harms toward Indigenous, Black, racialized, and poor communities. Combined with understandings from ecofeminism and queer ecology, this work is informed by the understanding that cisheteronormativity, transphobia, homophobia, ableism, sexism, and hypermasculinity are part of these interlocking systems that continue to privilege a certain few at the expense of everyone else by perpetuating ecological destruction. White heteronormative hypermasculinity reinforces ideals of rugged individualism and human exceptionalism by performing domination over the rest of the world, often excluding racialized and feminized abject others from the "human" in human exceptionalism. Performances of hypermasculinity often include behaviour that is destructive to the more-than-human world. Because violence against the land that sustains a people is akin to violence against human bodies,

addressing intersecting power structures addresses violence against both land and peoples (Iako'tsi:rareh Amanda Lickers qtd. in Women's Earth Alliance, 2016), and to do this, it is instrumental to follow the lead of marginalized communities who have, for a long time "illuminated the crucial intersections between ecological and social justice issues" (Adamson et al., 2002, 4). These projects thus take up an intersectional understanding of systems of oppression and look to learn from the wisdom of those whose environmentalism has emerged from places of Indignity, queerness, disability, and neurodivergence.

As a settler on Indigenous land engaging in land-based practice, I focus on learning from Indigenous, and specifically Mi'kmaw cosmologies. Many Indigenous cosmologies share similarities in an understanding of animacy in the more-than-human world. Kimmerer (2013) explains that this is true in the Potawatomi language, which is verb-based for a "grammar of animacy" (53). Similarly, Anishnaabe and Haudenosaunee scholar Vanessa Watts (2013) explains that in Haudenosaunee and Anishnaabe cosmologies, non-human beings have equal agency with human beings (23). Animacy, or the belief that everything is alive, is also foundational to Mi'kmaw cosmology, as Mi'kmaw scholar Margaret Robinson (2014) explains. This is reflected in the Mi'kmaw principle of M'sit No'kmaq, which can be translated to "all my relations," and is the understanding that all parts of the more-than-human world are relatives to whom we are accountable for relating with respect and reciprocity (Doucette & Hache, 2021; Hurley & Jackson, 2020, 39; Marshall, 2020; M'sit No'kmaq et al., 2021, 840; Robinson, 2014). While I seek to engage with and learn from these concepts, I engage in constant reflexivity in order to heed Watts' (2013) caution against a tendency for non-Indigenous

thinkers to reduce Indigenous cosmologies to metaphors, thus maintaining colonial control (26).

The animism present in many Indigenous cosmologies supports a shift away from anthropocentrism toward ecocentrism, which is also reflected in the deep ecological perspective that all living things have intrinsic value, independent from human needs or wants (Garrard, 2012, 24; Naess, 2015, 49; Sessions, 1995, 270). The deep ecological perspective understands species as inextricably interconnected and mutually determining, affecting and shaping each other through millions of years of coevolution (Morton, 2010, 275). This is consistent with various Indigenous land-based understandings of humans as integral to the more-than-human web of life, dependent upon and responsible to other beings for survival. By highlighting the ways in which violence against one entity is violence against the others, an ecocentric shift demands changing exploitative human relationships with the more-than-human world. The projects described in the chapters that follow take up this ecocentric perspective as a way to understand what is being lost through anthropocentric views of the more-than-human living world.

Moving even further away from anthropocentrism is the posthumanist understanding that not only are humans interdependent with the rest of the living world, but that the category of "human" itself is porous and indeterminate (Sundberg, 2014). Beyond dismantling the false divide between human and nature, posthumanism undoes clear delineations around the category of human, understanding species as porous and interpenetrating one another, and co-constitutive through relationship (Barad, 2007; Haraway, 2016). The projects described herein take up a posthumanist challenge to constantly question the category of human, and to observe how species are in many ways entangled in multi-species relationships co-creating each other through affect (Haraway,

2008). It is from this understanding that this thesis work aims to tend to relationship with more-than-human others as a way of decolonizing and de-anthropocentrising these relationships.

This perspective is also informed by affect theory, which theorizes that, through the capacity to affect and be affected by other entities (Chen, 2012) all beings are composed by each other in their relatings, and it is these collective affects that compose worlds (Ahmed, 2004). Given the grim outlooks for the future (Bendell, 2018), and given that those of us who are alive right now are witnessing, during our brief lifetimes, something so monumental in the lifespan of the planet that it stretches beyond our comprehensions into deep time, "suffering from disbelief is a prime affect of the contemporary moment" (Berlant & Greenwald, 2012, 81). Another prime affect woven in with disbelief is grief at the unimaginable scale of losses that we are witnessing during a mass extinction event (Albrecht, 2019, 10). Because the losses in a mass extinction event do not stop, this is not a sort of grief that can be dealt with and then moved on from (Head, 2016). Feelings of hopelessness and despair result from contending with the enormity of the task of ending exploitation and destruction and building a new, livable worlds in which multi-species entanglements can thrive. Entangled with these mostly negative emotions, there are also experiences of gratitude for the continued generosity of more-than-human relatives and the rest the living world, and wonder at the complexity and intelligence contained within collaborative multi-species entanglements that have co-evolved through hundreds of millions of years (Kimmerer, 2013; Naidus, 2016; Rose, 2017). These affects of disbelief and grief are therefore part of the materials with which we must work to imagine and grow whatever worlds are to come next (Head, 2016). Again drawing from what various land-based Indigenous epistemologies have known for

millennia, affect theory in ecology, or what Lorenz-Meyer et al. (2015) call "affective ecologies," understand affect as the mechanism through which interconnected entities shape one another.

A consideration of deep time brings to these projects a way to contemplate how these webs of interconnection extend not only spatially, but also temporally (Lorenz-Meyer et al., 2015). As "a vivid record of past landscapes" (Bjornerud, 2018, 24), the rock record provides glimpses of past worlds that run through and form the current world. Paying attention to these traces of past worlds and learning from the dynamic forces of non-human agency that have shaped the present world provides a foundation for understanding how destructive Anthropocene actions interact with these forces to have impacts into shaping worlds deep into the future. Deep time considerations show that the relatively instantaneous consumption of fossil fuels over the span of less than a century is in vast contrast, by orders of magnitude, with the millions of years that went into their creation and the unknown hundreds of thousands or millions of years into the future into which the impacts of this burning will reach (Fredengren, 2018, 53; Lorenz-Meyer et al., 2015, n.p.). And, given the brevity of human existence on a planetary timescale, it becomes clear how extremely arrogant it is for some humans to make such deep time interventions with such little consideration. While standing "on the 3.9-billion-year-old granite of the Canadian Shield," Nicholas de Pencier (2018) writes, "I get a visceral feeling that I am what geologists call a 'fleshy transient'" (207). While human lives and bodies may indeed be "fleshy transients," the impacts of human exceptionalist petrocapitalist behaviours will likely be much less transient.

As I paddle through the scattered islands composed of uplifted sedimentary layers of the Goldenville Formation in Eskikewa'kik, in Mi'kma'ki (the Eastern Shore of Nova

Scotia), I stop now and then to inspect and run my hands over the rippled surface of an ancient seabed, and wonder about the world that it came from (Figure 1.1). Where all has this matter been, what has it seen, what forces and whom have acted upon it, where will it end up next, and what impact, if any, does my interaction with it have? How many other "fleshy transients" like myself have passed over it, leaving no visible mark? In the city I notice a block of old houses that has been torn down to make way for a new building. I briefly wonder what human history those demolished buildings might have held, and then note that the bedrock that is being blasted away likely represents millions more years of history. Buildings will eventually collapse and decay, but the deep hole in the bedrock will likely be there until some other geological forces fill it in, erode it away, or metamorphose it into something new.

Figure 1.1: Uplifted rock layers. July 14, 2021.

Turning attention to such depths of time forces considering the vast contrast between the immense magnitudes of time into which Anthropocene impacts reach and what comparatively seems like the extreme brevity of human existence. Being rooted in a sense of the deep past from which our present selves emerged and the deep future into

which the effects of our actions reach can mobilize resistance to the systems that perpetuate destruction of the living world (Bjornerud, 2018; de Pencier, 2018; Fredengren, 2018; Lorenz-Meyer et al., 2015). Such considerations of deep time inform this project that aims to make ethical shifts away from destruction of life and toward actions that return to some state of reciprocal relationship with more-than-human kin, and thus tend more toward supporting a habitable future.

The "return" in this future-tending is in some ways a practice of "rewilding"—a concept that focuses on building alternatives to the capitalist present by caring for each other in collaborative more-than-human community. Having emerged in scientific discourse and then spread into usage in activist discourse, "rewilding" implies a return to something wild, but in the case of irreversible ecological damage and extinction, no return to some previous state is possible (LaRocque, 2010; Jørgensen, 2015, 482-483). Rather, the "return" is to a system of supporting and fulfilling the needs of multi-species communities outside of exploitative capitalist structures. The return is toward a state of reciprocal relationship with more-than-human kin as collaborators, equal in agency, intelligence, and creativity, but this "return" cannot be to any past version of the world. While we must learn from the past, the world to come must emerge from the world as it is now, irrevocably shaped by capitalism and colonialism. Therefore, whatever wildly collaborative multi-species assemblages are "returned" to will inevitably be different from any past assemblages.

Rewilding can be a call for non-Indigenous people to learn from Indigenous land-based and place-based knowledges and skills, but this also presents the risk of appropriation of Indigenous skills and practices and perpetuation of settler colonial

entitlement to land. Merely learning about the "uses" of various plants and zealously collecting them can risk compromising the balance in the ecosystem (Graveline, 2020). Further, learning to identify and make use of plants (or animals or earth) without unlearning settler colonial entitlement and the view that these are "resources" is to neglect to undo the ideology of exploitation in the first place. For settlers, rewilding requires learning how to harvest honourably (Kimmerer, 2013) as a way of healing and rebuilding relationship in more-than-human community.

This resonates with the Mi'kmaw principle of Netukulimk, which Prosper et al. (2011) explain as the "culturally rooted concept [that] operates as a guide to responsible co-existence and interdependence with natural resources, each other and other than human entities … [and] provides for the present by sustaining the future" (3). The Peace and Friendship Treaty of 1752 affirmed the Mi'kmaw right to practice Netukulimk, however this right has been systematically violated for centuries (Palmater, 2016). As a settler living in Mi'kma'ki, I benefit from hundreds of years of these "resources" being extracted from Mi'kma'ki at the expense of Mi'kmaw abilities to practice Netukulimk. My responsibilities to treaty therefore include resisting ongoing ecological threats that increasingly restrict Mi'kmaq abilities to practice Netukulimk, as well as learning from the principle of Netukulimk in order to develop a decolonial settler practice of relating with land. Understanding from Netukulimk that the natural abundance in local ecosystems can adequately provide for human and more-than-human needs if treated with respect, reciprocity, and gratitude (McMillan & Davis, 2010), this research uses rewilding as a framework for conceptualizing decolonial settler engagement with land.

In my activation of the concept of rewilding I include the understanding that the ruins and waste of late capitalism too are land, deserving of attention, care, respect, and

gratitude (Liboiron, 2018a). These ruins are waste, weeds, and destroyed landscapes; things which are currently in great overabundance in places where they are not supportive of the survival and flourishing of ecosystems. These materials of waste, weeds, and destruction present the challenge, not only of remediating their harmful effects, but of questioning how best to resituate it from a context in which it is harmful to one in which it is not (Douglas, 1966). Caring for waste, weeds, and destroyed landscapes in this way is a way of responding with gratitude and reciprocity to the deep time processes that contributed to the creation of fossil fuels, and of particular ecosystem entanglements. Waste and ruins are what we have, and are thus the materials with which we have to build reimagined livable futures (Lee, 2016).

1.6: Curiosity, Creativity, Care, and Collaboration

In the chapters that follow, I chronicle three connected arts-based research projects that explore settler roles and responsibility and work with the themes of the climate crisis and mass extinction in the so-called Anthropocene, from a perspective that is informed by these various aforementioned ecological perspectives. Paying close attention to complex relationships that form the web of the living world makes it possible to learn from these more-than-human teachers about collaborating in multi-species community. This can be a settler method for making kin, being responsible to more-than-human relations, and decolonizing settler relationship with land. The task of "making kin" requires more than just claiming as kin, or recognizing the ways in which we are interdependent with other beings and things. It requires concrete actions of care and respect toward those whom we seek to claim as kin (Haraway, 2015, 103, 162; van Dooren, 2014, 292). Through the works described in the following chapters, I contend

with particular troubling aspects of my entanglement in destructive colonial systems—my own use of plastics and fossil fuels, and my involvement in and benefitting from colonial violence and violation of treaties, theft of land, and exploitation and destruction of land. Through these projects, I explore possibilities for ways to act with care and therefore be responsible to the more-than-human beings whom I want to be able to call kin.

These projects are informed by perspectives from marginalized communities who have already experienced various forms of apocalypse, and therefore already have many skills of cultivating life-sustaining relationships in apocalyptic worlds. Those whose knowledge and skills emerge from experiences of marginalization and oppression draw on skills of being highly adaptive, creative, and building supportive community. Indigenous peoples have experienced multiple apocalypses throughout the last few hundred years, and "the renewal and resurgence of Indigenous communities *in spite* of world-ending violence is something that Euro-Western thinkers should heed" (Davis & Todd, 2017, 773). Likewise, Alison Kafer (2013) explains that from experiences of disability emerge "alternative ways of understanding ourselves in relation to the environment" (131). Those who have had to be creatively adaptive to survive often have knowledge and skills that are vital to building a livable world for everyone. Likewise, Berne and Raditz (2020) explain:

> Even when … we feel defeated by the sheer scope of everything that's wrong in the world, we don't give up on life or on humanity. Queer and trans disabled people know that, because that's how we live. At this moment of climate chaos, we're saying: welcome to our world. We have some things to teach you if you'll listen, so that we can all survive. (n.p.)

Similarly, as LeBel (2020) argues, communities who have already survived various apocalypses have learned "ethical ways to mourn environmental losses" (n.p.). From the AIDS crisis, LeBel explains, queer communities have learned that "grieving queer lives in

a homophobic society can open up ways to grieve extinct species and devastated land experienced in climate change" (n.p.). The projects in the following chapters look to the knowledge, wisdom, and survival skills that emerge from such places of queerness, Indigeneity, disability, and neurodivergence.

Key to these apocalypse survival skills is the ability to see the value and worth in that which has been laid to waste or deemed to be waste by capitalism. These are the skills of caring for community, for those who have been deemed extraneous to the onward push of capitalist "progress," by using waste, ruins, and rejects as the building materials for alternative, habitable, and vibrant presents and futures (Berne & Raditz, 2020; LeBel, 2020; Lee, 2016; Piepzna-Samarasinha, 2018). Through collaboration with material agency, waste can be re-situated into configurations that support life, are reinfused with desire, and thus transformed into not-waste (Thill, 2015). This waste is the material that forms the threads for mending tears in the web of life and weaving new reciprocally supportive multi-species entanglements. The material for this mending—metaphorical and material bits of thread and patches of fabric—is gathered from the colourful array of waste and rubble in the ruins of capitalist exploitation. In this time of ecosystem unravelling, collaborative mending by stringing together new connections from the pieces of the old is the work of coevolution and world-making (Naidus, 2016). The three projects outlined in the chapters that follow are different iterations of this same work of mending tears and holes in the fabric of the living world and weaving new entanglements.

This practice takes up Haraway's (2016) call to "make the Anthropocene as short/thin as possible and to cultivate with each other in every way imaginable epochs to come that can replenish refuge" (160). Moving beyond the Anthropocene as quickly as

possible—making it more of a boundary event than an epoch—is the urgent work of artists and other creatives to imagine and embody the world that is to follow as one that is habitable and nurturing for the multitude of kin-species tangled together in webs of interdependence. In response to Haraway's (2016) call to "stay with the trouble," I work with themes of witnessing, loss, and memory in sites of trouble. Contending with the scale of loss and the immensity of the task and what sometimes seems to be a futility of efforts to make any difference often leads to feelings of hopelessness. But, as Haraway (2016) argues, "staying with the trouble does not require such relationship [of hope] to the future" (1). Through the projects described in the following chapters I contend with how to nevertheless continue towards imagining and building possible futures, regardless of how elusive hope may be.

1.7: Methodology

In the following chapter I explain how I address these topics within arts-based practice of "research-creation," a term coined by Canada's Social Sciences and Humanities Research Council (SSHRC) that recognizes the blended role of artist/researcher (Levin, 2009). Rather than choosing a subject, deciding which research method best fit the subject, and then setting out to employ it, my methods emerge from a dynamic and embodied creative practice of tending to relationship through small acts of care for more-than-human kin. Working on land and in collaboration with a dynamic living world of more-than-human actors, this artistic research practice blends various emergent and arts-based methodologies through action and embodied engagement in a practice of research-creation. Research-creation makes interventions into what is considered scholarly, and "is a mode of inquiry—a way of getting interested and involved

in the world—that takes seriously embodied … practices of making as immanent to the processes of making knowledge" (Myers qtd. in Truman et al., 2019, 227). Alongside other practitioners of research-creation (Truman et al., 2019), and drawing on the insights of scholars of experimental and innovative emergent arts-based methodological approaches (Culhane, 2017; Elliott & Culhane, 2017; Hall, 2017; Haseman, 2009; Hesse-Biber & Leavy, 2008; Leavy, 2015), I engage in emergent methods of responding to the urgency of the present ecological crises.

I describe my blend of these methods that include aspects of performance-as-research and autoethnography with various other embodied, creative, and emergent epistemological practices. I describe my use of performance-as-research as a method of creative experimentation, and as an iterative practice of shifting meanings: of plastic marine debris from waste to artifact, of invasive plants from nuisance to creative collaborator, and of beings and things within a blasted landscape from insignificant impediments to "progress" to vibrant parts of a living ecosystem whose loss is of great consequence. My telling of the stories of the unfolding of these research processes, in academic form as well as in the form of small art booklets, takes on aspects of autoethnography and reflexivity through critical reflection on how my own experiences and knowledge are shaped by my settler identity. Despite being unruly and often difficult to define, emergent arts-based methods can form rigorous research practices that are shaped by embodied relationship and collaboration with aspects of the lively and vibrant material world (Leavy, 2015; Levin, 2009).

Taking up this urgent task of imagining and building livable futures through arts-based methods, in the following chapter I expand upon how these methods form my creative practice. I engage in a practice of thinking through and enacting care as a way of

tending to relationship in sites of trouble, disturbance, or destruction. The meaning of care in the context of working toward building viable multi-species worlds requires emotional engagement and some sort of concrete involvement or action, and assumption of responsibility (Conley, 2016; Puig de la Bellacasa, 2017; Ricou, 2014; Rose, 2017). It also requires consideration of the ethics or politics behind these acts of care—that is, it demands that I question who and what are being supported or protected by this care, and whether it is preserving the status quo or directed toward supporting and nurturing those who are neglected or harmed by the status quo (Duclos & Criado, 2019; Puig de la Bellacasa, 2017). The answer to this is never easy or simple—care for some might mean violence for others, and it may not be clear where ethical obligations lie (van Dooren, 2014). But it is in working with the complexities and tensions that new meanings and relationships may be generated, and caring becomes a creative act of imagining and world-making (Haraway, 2016; Shotwell, 2016; van Dooren, 2014). I demonstrate how my work contributes to this field an example of a settler decolonial land-based practice of creative and ongoing engagement with treaty, and with Mi'kmaw and other Indigenous land-based knowledges. Altogether this forms an emergent arts-based settler method for decolonizing relationship with land in order to work toward creating survivable worlds for multi-species entanglements beyond the Anthropocene.

1.8: Practice, Projects

1.8.1: *Arts-Based Practice*

In chapters three, four, and five, I describe my explorations of these themes through three different but intertwined projects. These involve creative material

explorations that investigate questions of how to enact care and tend to life-sustaining multi-species entanglements. In three separate chapters, I describe my work with plastic marine debris, with Japanese knotweed (a plant that is invasive on Turtle Island), and with witnessing changes and performing small acts of care in a forest turned blasted landscape. Through these concrete material actions I look for where settler responsibility lies in relationship on land in Mi'kma'ki, while entangled in the system that perpetuates destruction, and being homesick for more-than-human kin and heartbroken for the future.

1.8.2: *Plastic*

In the third chapter I describe my work with plastic marine debris, which grew in response to a material that seemed to be demanding my attention. When I first started collecting marine plastics and recording what I collected, my intent was to come to understand what kind of difference an accumulation of small acts can make, and thus inspire a sense of hope in resistance to futility. Rather, with the ever-growing collection of collections, hundreds of pictures and lists, the volume of accumulating plastics became even harder to comprehend. Moreover, the amount of plastics that I continued to find on shorelines did not seem to decrease, and so, this all started to seem more like an exercise in proving futility than in finding hope. Rather than grasping a comprehension of scale, from habitually collecting ocean plastics I learned instead about the inextricable entanglement of the living world. Rather than cleaning shorelines, this became more of a practice of curating artifacts (Selby Lang qtd. in Freinkel, 2011, 127). Rather than measuring cumulative volumes of clean-up efforts, what was most interesting and useful about endlessly collecting was what the objects revealed about intertwined forces of human/creature/ocean agency. When viewed as artifacts, I found that these objects told

stories about human habits, and the continued lives of plastic objects once they are discarded. Contrary to plastic being resistant to decay and able to protect humans and humans' food from contamination, plastics disintegrate into microplastics, and flow through and highlight every channel of connection and interdependency in the living world (Robertson, 2016; Thill, 2015). Through a practice of observing and struggling with the material entanglements, it became even more clear that rather than trying to clean up such impossibly undoable messes, the task is to address "the complex social, environmental, and economic problem[s]" that are the cause of so much plastic in the oceans in the first place (Davis, 2015, 354). I finish this chapter by describing my continued engagement with plastic as more of a practice of curating artifacts and collecting material resources for creative repurposing and building post-Anthropocene worlds.

1.8.3: *Knotweed*

In the fourth chapter I describe my work with Japanese knotweed, a highly invasive plant species in Mi'kma'ki and also in Ktaqmkuk (Newfoundland), where I carried out the majority of this project during an artist residency at Eastern Edge Gallery. Kimmerer (2013) explains that, while some introduced plant species are invasive and destructive to native ecosystems, others become collaborative parts of ecosystems without taking over or pushing others out. To address the invasiveness of my own species of European-descended settler colonial human, I set out to work with another invasive. Not wanting to perpetuate colonial resource-grabbing land entitlement by thinking myself entitled to harvest or contributing to the over-harvest of Indigenous plants, I turned toward the most invasive plant that I knew of, hoping that—just as I had been

"harvesting" invasive plastics from shorelines at least in part as a cleanup effort—the act of harvesting knotweed could itself become an act of care for land. I describe how I set out to discover what gifts this insistent plant had to offer, hoping that it might be able to provide for some of the needs or wants that cause over-dependency and exploitation of other parts of ecosystems. But, as with my work with marine debris, the project started from an intention to answer one question, and then, through collaboration with the more-than-human world and material agency, the direction of the work shifted.

I describe how I first tried to figure out how to use knotweed to make cordage, and then to make paper, through many unsuccessful attempts using a variety of methods to try to persuade knotweed to cooperate with my visions. I had intended that I would use cord made from knotweed to perform some gesture of mending in some site of disturbance or destruction. Not only was I unsuccessful at making cord of any strength or length, but, as I learned more about knotweed, I discovered that, because knotweed can spread from any part of the plant, my idea of using knotweed cord in a land-based work could have unintentionally resulted in contributing to its spread. I describe how I then turned my attention away from trying to use knotweed to perform acts of mending on the land and to reduce demand for tree pulp, instead toward working with already-existing and abundant waste paper. Understanding the ineffectiveness of the recycling system (Humes, 2012), I sought to learn how to be responsible to this material that so abundantly pass through my hands and demanded my attention. Rather than just tossing this material into one bin instead of another and feeling accomplished for having "recycled" it, I sought to learn how to actually recycle it myself. This chapter chronicles a journey of learning about practicing gratitude for the earth's gifts (Kimmerer, 2013), rather than just expressing frustration when the gifts weren't what was wanted or expected. In a

continued practice of working with waste to enact care for more-than-human kin, I sought first to be responsible to sites of disturbance that had been colonized by knotweed, and then to sites that are disturbed by excessive consumption of paper products. Learning from material and plant collaborators, this chapter outlines a project of learning to become a less-invasive settler by working in and with sites of disturbance.

1.8.4: *In Memory of Small Things*

In the fifth chapter I describe my responses to three elements in a blasted landscape near Kjipuktuk, in Mi'kma'ki, in an effort of learning how to "stay with the trouble" (Haraway, 2016) through active engagement in sites of irreversible loss. I chronicle my observations and practice of witnessing as the landscape with which I had previously been familiar was clearcut and then bulldozed and blasted, eventually resulting in an expanse of flattened featureless jumbled broken rock. I draw on the insights of theorists who argue that we are called to witness the losses and unravelling of the living world—which involves emotional investment, memory, sharing with others what was witnessed, and has political implications (Baichwal, 2018; Demos, 2017a; Gaertner, 2016; Gillespie, 2016; Haraway, 2016; Kettleborough, 2019; Nock, 2014; Rose, 2017). Drawing on these various theorizations of witnessing, I engaged in a practice of being present, paying attention, and enacting care in some small and local aspects of the sixth mass extinction. While the area in which I focused this attention and effort was not protected or a key conservation area, nor was it particularly scenic or spectacular, my choice to focus attention on this landscape was an act of performatively shifting the idea of value with respect to the more-than-human world. Within this space, I focused my attention on small and easily overlooked plants and landscape features in order to resist

the narrative that that which is outside of or irrelevant to the "progress" of capitalist growth is insignificant, expendable, and of no great loss. Focusing closely on the specific—a small white pine tree, a small pond, and a patch of blueberry bushes—I sought to emphasize the value in each. Despite my inability to stop the destruction, I sought to find ways to enact care through witnessing and material gestures, and by telling the stories of my interactions with these small things, which I made into three booklets, each one telling the story of my observations and interactions with one of these three entities. This fifth chapter follows my explorations as I experimented with concrete and decolonial ways of "staying with the trouble" in a landscape where any efforts to make a difference seemed futile.

Through this practice I found that, more than lobbying or protesting, the most concrete thing I had to offer in this landscape of destruction was my attention. While I did transplant and maybe save a few blueberry bushes, I otherwise had no effect on the end result of the destruction. But, through witnessing the destruction, I was able to remember and archive and assert the value of what was being lost. Learning to see the "ghosts" in this blasted and disturbed landscape—the traces of missing species and ecosystems, and the places in which their absences are felt—developed an ability to recognize where there are "ghosts" in other landscapes, in resistance to "shifting baseline syndrome" (Gan et al., 2017, G6; Matthews, 2017). As the climate changes, and as land changes, land-based knowledges and lifeways change and are threatened (Watt-Cloutier, 2015). For settlers such as myself learning from Indigenous land-based knowledges and skills, it is vital to recognize the ways in which the land from which we learn has been and continues to be deeply altered by colonialism. Unsettling settler colonialism requires recognizing these places where colonialism has and continues to leave traces, in resistance to shifting

baseline syndrome, and in resistance to the erasure of worlds that have been violently obliterated to form the present one.

Paying attention and constantly learning to see traces of colonialism are precursors for an unsettling practice of care. In wastelands, blasted landscapes, and sites of disturbance and neglect, this becomes "a critical stance against neglect" and questioning "how things could be different"—that is, a practice of world-making (Puig de la Bellacasa, 2017, 17). In this chapter I describe a concrete practice of being present and enacting care in a troubled landscape. I describe how I found that witnessing and remembering, while not effective at stopping the destruction of this particular landscape, were still actually some of the most concrete and vital actions that I could make toward decolonizing and mending relationship with the rest of the living world.

1.9: Arts-Based Research for Livable Post-Anthropocene Futures

The following chapters elaborate on these three interconnected projects that are a part of an ongoing arts-based research practice aimed at decolonizing settler relationship with land and building possible livable post-Anthropocene futures. Working with the spoils and discards of capitalist exploitation, this practice joins the urgent creative work of imagining and building alternatives to the precarity and immense loss of the current world order. Informing this work is a reflexive settler engagement with Mi'kmaw place-based and Indigenous land-based knowledge and skills. This practice aims to embody the task of cultivating reciprocal relationship with the more-than-human living world through creative experimentation with ways of enacting care. Through a decolonial settler treaty practice of tending to more-than-human relationship, the three projects described herein

aimed to mend and re-weave entanglements in the fabric of the living world from Anthropocene waste and ruins to build livable post-Anthropocene futures.

Chapter 2: Arts-Based Methodologies: Small Acts of Care in Sites of Destruction

2.1: Introduction - Practice, Process, and Emergent Methods

This chapter outlines a combination of arts-based research methods that blends the roles of artist and researcher. Rather than choosing a subject and then deciding which research method best fit the subject and setting out to employ it, this describes a methodology that emerges from an embodied practice of tending to relationship with the more-than-human living world. In this chapter I discuss some of the arts-based methods which intertwine through my work and that are used by other artist researchers, including performance-as-research and autoethnography. I discuss a practice of settler engagement with Indigenous cosmologies including concepts specific to Mi'kma'ki, in order to work toward decolonizing my use of other methods. This practice is a method of research and of upholding treaty that tends to multi-species relationships and is therefore conducive to the projects of moving toward livable futures in and beyond the current colonial and capitalist-induced climate, biodiversity, and humanitarian crises.

While addressing global problems of climate crisis and mass extinction on the large scale by pressuring governments and corporations and other world powers to end dependence on fossil fuels and end exploitative practices of extracting resources and labour is vital and important work, this method instead focuses on the small scale and rests with the specific. This is because, even if there were some immediate stop to carbon emissions and ecosystem destruction, there is an unfolding chain of events that is now likely unstoppable (Bendell, 2018; Goldblatt & Watson, 2012; Johnson, 2019; Lenton et al., 2019), and there is still much work to do to contend with the irreversible losses and

damage. With the future of life on the planet so precarious and uncertain, and the likelihood of near-term collapse of capitalism's linear economy of extraction, consumption, and waste (Bendell, 2018; Servigne et al., 2020; Wiebe et al., 2015), this method focuses on cultivating the relationships and land-based knowledges and skills that are vital to building livable—if not also vibrant—futures for multi-species entanglements in the ruins of capitalism.

Such work amounts to a practice of what Donna Haraway (2016) calls "staying with the trouble," the trouble being those situations and places that are tricky, not just because they cause sadness or are hard to bear, but also because—for those of us who are entangled in and benefit from destructive capitalist extraction practices—of the complexities of being complicit in what is amiss (1). Addressing this from a position of settler privilege requires ongoing reflexivity aimed at decolonizing relationships with the more-than-human living world. Crucial to this task is learning from Indigenous knowledge systems and skills—not to appropriate them in an attempt to become native (Tuck & Yang, 2012), but to learn from millennia of land-based knowledge in order to develop a less exploitative, reciprocal, decolonial settler relationship in community with more-than-human kin (M'sit No'kmaq et al., 2021, 843; Sundberg, 2014; Todd, 2016). Drawing on the insights of others who theorize about the necessity of "staying with" (Haraway, 2016), observing, paying attention, noticing, (Bubandt, 2017; Gan et al., 2017; Kaprow, 2004; Matthews, 2017; Tsing, 2015), and witnessing (Gillespie, 2016; Kettleborough, 2019; Rose, 2017), my creative practice works to form and tend to relationship through small acts of care in sites of Anthropocene trouble (Haraway, 2016). This practice yields knowledge about how multi-species relationship composes the fabric

of the web of the living world, and thus understanding of my own place in it (Bjornerud, 2018; Matthews, 2017).

Various forms of outward expression of this creative practice (photos of marine debris posted on social media, an art gallery full of marine debris artifacts, land-based performances, printed materials) document the creative practice and invite others to join me in questioning, observing, wondering, and caring for more-than-human relatives. My work thus becomes part of a dialogue that allows for the agency of other actors, human and non, to influence the direction of the research. By being attentive to, interacting with, and enacting care for more-than-human beings, this practice aims to do the work of actually making kin with this kin (Haraway, 2016).

2.2: Settler Engagement with Indigenous Methodologies

My engagement with land as a settler of mostly Scottish and Irish descent living and working in unceded Mi'kma'ki involves both the privilege of access to land facilitated by settler colonialism and white supremacy, and the associated responsibility to use this privilege toward dismantling those systems (Land, 2011; Palmater, 2016; Regan, 2010; Simpson, 2014). For millennia, the Mi'kmaq have been caretakers of this land and land-based knowledge and skills, and despite the interference of colonialism and genocide, many continue to caretake land and cultivate land-based knowledges (Jardine, 2019; Kimmerer, 2013; McMillan & Prosper, 2016; Simpson, 2014). The 1752 Peace and Friendship Treaty outlined Mi'kmaq rights to carry out traditional practices of harvest that maintain relationships with more-than-human relatives and provide sustenance and necessities of life without being impeded (Battiste, 2016; Wicken & Reid, 1996). As is very clear, colonial settler society has not upheld its side of this agreement (McMillan &

Prosper, 2016; M'sit No'kmaq et al., 2021; Palmater, 2016; Pictou, 2019; Prosper et al., 2011). In so-called Canada, Indigenous peoples were and continue to be separated from land through such measures as Indian Residential Schools, the Indian Act, and the reserve system, all of which serve to make land available to European settlers (Palmater, 2016; Prosper et al., 2011). Because knowledge is land-based, rooted in and in relationship with more-than-human kin, the removal of Indigenous peoples from land amounts to a removal from knowledge, skills, relationships, and life-ways (Prosper et al., 2011). As a result, traditional Indigenous land-based knowledges across Turtle Island were and continue to be suppressed and erased (Prosper et al., 2011). This erasure of Indigenous peoples from land, combined with narratives about settler struggle and the survival of hardy pioneers (Epp, 2012; Mackey, 2012; Moreton-Robinson, 2003; Regan, 2010; Wysote & Morton, 2019), serves to naturalize settler presence and solidify settler entitlement to land (Epp, 2012; Moreton-Robinson, 2003).

As a result of all of this, I have the privilege of assumed belonging on land on Turtle Island that comes with whiteness. This assumed belonging contributes to my ability to access land, meaning that, regardless of whether I "own" land in the colonial system of land division and private ownership (Moreton-Robinson, 2003), my movement over and through land is not usually questioned or contested. If my presence on the land is questioned, it is most likely from well-meaning, if not also patronizing, concerns for my well-being as a potentially lost or in-distress lone femme somewhere off-trail. Whiteness means that I don't need to worry that my attempts at stealth in the woods could be perceived as threatening or suspicious by someone who might be tempted to call police

on a Black birdwatcher or photographer.[1] This easy access facilitates my ability to create land-based work and acquire land-based knowledge (Bawaka Country, 2016; Simpson, 2014).

In addition to my perspective being that of someone raised in a settler colonial culture without grounding in millennia of land-based knowledge and reciprocal relationship, the land that I access and from which I seek to learn has been and continues to be deeply altered by colonialism. Colonialism severs relationship and facilitates capitalist access to land for the purposes of destructive resource extraction (Kimmerer, 2013; Klein & Simpson, 2013) resulting in old growth forests nearly entirely wiped out, species extinct or extirpated, invasive species crowding out Indigenous species, complete terraforming of land in cities and suburbs and industrial areas, and pollution and waste everywhere (Lee, 2016). Because the land that I access has been deeply altered by colonialism, so too has the knowledge that I gain from land. A crucial part of land-based learning is thus learning to recognize the deep traces of colonialism on land (Fredengren, 2018; Gan et al., 2017; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020; Svenning, 2017).

Raised on settler colonial narratives of Canadian benevolence and peacefulness and naturalized settler entitlement to land (Epp, 2012; Mackey, 2012; Regan, 2010; Wysote & Morton, 2019), settlers—even those with a few centuries and a handful of generations of settlers in Mi'kma'ki or elsewhere on Turtle Island—are not rooted in millennia and countless generations of place-based traditional knowledge (Berkes, 2008; Menzies, 2006; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020). Settlers therefore need to learn from Mi'kmaw land-based knowledge, without appropriating it (Mackey, 2012;

[1] For example, see https://www.thecut.com/2020/05/amy-cooper-central-park-dog-video.html

Tuck & Yang, 2012; Watts, 2013). In my research I learn from the Mi'kmaw principles of M'sit No'kmaq (which translates to "all my relations"), Netukulimk (which refers to practices of responsible harvest), and Etuaptmumk (or two-eyed seeing, a combining of traditional Indigenous knowledge systems and western scientific knowledge) in order to guide and ground my work in traditional knowledge that has come from the land where I now live and work (Doucette & Hache, 2021; Hurley & Jackson, 2020; Marshall, 2010; McMillan & Prosper, 2016; M'sit No'kmaq et al., 2021).

M'sit No'kmaq, "all my relations," teaches that humans are related to and responsible not simply to other humans but also to the whole of the life-sustaining world (Doucette & Hache, 2021; Hurley & Jackson, 2020; Robinson, 2014). Erica Samms Hurley, a Mi'kmaw scholar from Newfoundland, and Margot K. Jackson (2020) explain that M'sit No'kmaq means we are all "called to attend to all [our] relations," and that those "relations include the universe, living and non-living things, and … community" (39). Margaret Robinson (2014) discusses an understanding of personhood as not exclusive to humans, but to all relations in the rest of the living world as well as the non-living world (Robinson, 2014, 673). In sharp contrast with western colonial ideas of human exceptionalism and the rest of the world as merely a stand of resources (Haraway, 2008; Kimmerer, 2013; Klein & Simpson, 2013; TallBear, 2017; Watts, 2013), M'sit No'kmaq requires respect, responsibility, and reciprocity.

In my work I engage with this concept through an ongoing process of learning from more-than-human relations and how I might be responsible to them. Hurley (2020) explains that M'sit No'kmaq "holds [them] accountable to address … how [their] Indigeneity impacts how [they] experience the world" (39). As a settler, then, I am accountable to addressing how my white settler identity impacts how I experience the

world, because land-based knowledge comes from relationship, and my identity is a part of what shapes that relationship (Berger, 2015; Hurley & Jackson, 2020; Land, 2011). In my own work, constant reflexivity means questioning how I relate to "all my relations," how my settler identity affects these relationships, and how I might better tend to these relationships in ways that resist the colonial capitalist systems upheld by narratives of human exceptionalism that sever human relationships with more-than-human kin (Haraway, 2008) I do this by engaging with plastic waste in order to be responsible those more-than-human kin who live with marine debris, by working with invasive knotweed as a way to enact care toward displaced Indigenous plant species, and by experimenting with ways to enact care in the face of futility in a landscape doomed to clearcutting and blasting.

As explained by L. Jane McMillan and Kerry Prosper, who is a Mi'kmaw elder from Paktnkek First Nation, the Mi'kmaw concept of Netukulimk refers to a practice of sustaining oneself and one's community in a way that honours and sustains all of these relations of ecosystem for generations to come (2016, 639). Netukulimk is a set of principles that guide Mi'kmaw practices of harvesting and managing resources, which, McMillan & Prosper (2016) explain, includes "respect, reverence, responsibility, and reciprocity … , co-existence, inter-dependence and community spirit. … It is about provisioning, it is not about extracting, it is about sharing and managing and taking just enough" (641). It is a Mi'kmaw-specific version of what Kimmerer (2013) describes as the "honorable harvest" (183).

McMillan and Prosper (2016) explain that the ability to practice traditional methods of fishing and hunting and to access land where food can be and traditionally has been harvested is thus crucial for Mi'kmaw abilities to practice Netukulimk (632). While

the ability to practice hunting and provisioning (among other forms of livelihood) without being impeded was to be guaranteed by the Peace and Friendship Treaties, treaty violations have resulted in poverty, food insecurity, and dependence on welfare for many Mi'kmaw communities (McMillan & Prosper, 2016, 633). The first part of the settler role in Netukulimk is thus to adhere to treaty obligations to avoid interference with traditional Mi'kmaw practices of hunting and harvesting, and to resist systems that maintain Mi'kmaw separation from land. Further, settlers can learn from Netukulimk and the concept of the honourable harvest (Kimmerer, 2013), and thus engage in practices of harvesting that respect the integrity of the web of interrelated beings and resist destructive capitalist extractive practices. My practice of collecting and making use of readily abundant and made-at-great-environmental-costs plastic waste and abundant invasive plants is guided by the principle of not taking more than what is needed, and taking from places that are willing to give (Kimmerer, 2013). It is also a practice of honouring the lives and labour that provided these resources by resisting their being turned to mere waste.

Another Mi'kmaw concept is Etuaptmumk, or Two-Eyed Seeing, which is the concept of weaving together traditional Indigenous ways of knowing and western scientific knowledge (Bartlett et al., 2012; Marshall, 2010; Marshall & Lefort, 2020). While the concept has always existed, the term was coined and popularized by Mi'kmaw Elders Murdena and Albert Marshall. Often scientific ways of knowing are prioritized or considered necessary to prove the validity of traditional Indigenous knowledges, and frequently traditional Indigenous knowledges are treated as merely supplemental to scientific knowledge (McGregor, 2008; Shultis & Hefner, 2016). In contrast, Two-Eyed-Seeing, or Etuaptmumk, treats the two ways of knowing as different and equally valid.

"Through a two-eyed seeing lens, knowledge is framed as spirit rather than as commodity or property" (Bartlett et al., 2012, 336). In my practice, I work to combine two ways of knowing in art. While I am primarily an artist and not a scientist, art and science are not so clearly delineated as separate from one another. With some background in various sciences at the undergraduate level, I maintain a continued interest in what science informs my practice. I was raised and educated in a settler-colonial system that strongly prioritized sciences over arts, and which did not include any reference to the existence of Indigenous or traditional land-based knowledge prior to post-secondary education. I therefore now focus my practice on addressing the gaps in my knowledge—by learning from the traditional knowledges of the Indigenous peoples in whose territories I am living, and working to synthesize these different ways of knowing in a decolonial creative settler land-based practice.

2.3: Decolonizing Research and Art

Engaging with Mi'kmaw principles and other Indigenous cosmologies in order to unlearn colonial perspectives is an ongoing process (Murdena Marshall, cited in joudry, 2016, 29). As Hurley & Jackson (2020) explain, traditional Indigenous knowledge is not something that can be possessed; rather, it is a set of principles of relating and learning from the land and from more-than-human relatives (45). For settlers, constant reflexivity is crucial to resisting appropriation of concepts, colonizing, or claiming ownership of Indigenous knowledges (Berger, 2015; Hurley & Jackson, 2020; Kovach, 2009; M'sit No'kmaq et al., 2021; Pitard, 2017), or engaging in the historical tendency for western educational institutions to use "research" as a colonial tactic of othering (Kovach, 2009). Likewise, reflexivity in an art or research-creation practice is vital to the work of

decolonizing (Decter, 2016; Decter & Taunton, 2013; Kershaw, 2009) and resisting the ways in which unexamined settler perspectives can reinforce colonialism.

Margaret Kovach (2009), of Nêhiyaw and Saulteaux ancestry, asserts the importance of non-Indigenous researchers attentively listening to Indigenous voices and knowledges, and of "decolonizing one's mind and heart" through an ongoing practice of reflexivity, or "examining whiteness … [and] power" (157, 169). Toward these aims, Linda Tuhiwai Smith, scholar from Ngāti Awa, Ngāti Porou and Tuhourangi tribes in Aotearoa proposes some questions to ask about research: "Whose research is it? … Whose interests does it serve? … Is her spirit clear? Does he have a good heart? What other baggage are they carrying? Are they useful to us? … Can they actually do anything?" (1999, 10). When I ask these questions of my research, I find that, because of the focus on relationship and tending to the more-than-human community of life-sustaining connections, my research is a practice of creative collaboration with land and more-than-human relatives. The intention is that this should benefit the interconnected web of the living world by fostering skills and connections that contribute towards building livable futures. I carry the baggage of having been raised and socialized in a white supremacist settler colonial society, which is why I therefore engage in the ongoing work of reflexivity toward decolonizing knowledge and relationships. This is part of the greater work of "fixing up" the relationship between settler colonial capitalist exploitative humans and the more-than-human living world.

Sharing these sorts of land-based skills and knowledge is a part of responding to widespread Indigenous calls for "land back." While this is a call for Indigenous lands to be transferred back into Indigenous governance and stewardship, the call goes much further than this. It is about "people returning back and finding their place in those

systems of life" (Murdoch, n.d.). However, finding one's place in systems of life doesn't just involve access to land, but also involves the return of knowledge, skills, and life-ways (@queerquechua, 2020). This means that settlers with land-based knowledge and skills of Indigenous origin—wilderness guides, outdoor and environmental educators—have a responsibility to share them, to give Indigenous skills and Indigenous knowledge back (@queerquechua, 2020). For myself, this includes skills such as kayaking and canoeing, navigation, some survival skills, knowledge of tides and currents and moon cycles, some knowledge about and from plants and foraging for food. All of this land-based knowledge has Indigenous origins, regardless of from whom I learned (Simpson, 2014; Todd, 2016). This giving back includes recognizing where these skills come from and giving credit where it is due in order to avoid perpetuating narratives of white settler authority over all things outdoorsy and its buttressing of narratives of settler entitlement and naturalness of settler presence. When I teach kayaking, I emphasize the origins of the qajaq as an Inuit seal-hunting vessel (Golden, 2006; Heath & Arima, 2004), and talk about how I understand my own relationship and settler responsibility to land and water, and invite others to do the same. I emphasize that the skills that I share are not my own, and that I am deeply privileged to have access to this knowledge. In contrast to the not-always-stated but often implied narrative of wilderness skills being an example of white settler cisheteromasculine mastery over nature (Mortimer-Sandilands & Erickson, 2010), I work to emphasize that the skills that I share are about learning from and learning to collaborate with water, materials, and with forces of wind, waves, and tides. Likewise, when I teach cordage-making or marine debris and natural weaving or guide hikes and walks, I encourage slowness and stillness, making space for reflections on material responsibility and how these practices shape relationships with land.

Although I have been privileged to learn skills such as canoeing and navigating and orienting myself using the sun or stars and moon from a young age, there is so much more that I did not learn about. Even when I spend an extended amount of time in a certain place, getting to know subtle details and changes, my lack of grounding in countless generations and thousands of years of ancestral place-based knowledge means that I don't know what other plants and creatures might have once lived here but have been made extinct or extirpated. While I have learned some things about identifying plants and birds and about who is introduced or invasive, I don't know much about the histories or presents of these relationships. I don't know what a particular place might have looked like before it was ever logged, quarried, farmed, or settled, or what a shoreline looked like before the most recent rises in sea level and erosion, or the disappearance of species whom I never got to meet. While old maps and photographs might offer some clues, there is only so much knowledge that these can communicate. Fostering land-based knowledge, looking to traditional Indigenous knowledge systems, and resisting colonial systems that erase, dismiss, or delegitimize Indigenous knowledge is thus a vital part of a settler project of rebuilding relationship with the more-than-human world (M'sit No'kmaq et al., 2021).

Like with research, so too must the creative work of art-making be decolonized from a history of imagery and aesthetics used as a tool for colonial narratives (Demos, 2017a; Robinson & Martin, 2016), such as idealized imagery of wilderness with the absence of any Indigenous human presence, or depictions of Indigenous peoples as primitive or disappearing (Bordo, 1992; McKay, 2011; Moray, 1998). Imagery of wilderness landscapes of North America often function to perpetuate the false dualism between human and nature (Demos, 2016, 14). Likewise, peaceful and harmonious

aesthetics of idealized nature can function to comfort and reassure, distracting viewers from whatever damage or destruction might be happening outside the frame (McKay, 2011). Decolonial and anti-capitalist creative work does not aim to offer comforting scenes, but rather to expose the reality of ecological destruction, and then to envision alternatives to colonial capitalist systems that are accelerating this destruction (Demos, 2017c; Simpson, 2014). Further, creative works that engage with available materials—such as waste, locally harvested plants—resist fuelling capitalism through the consumption of new materials, and thus also resist capitalist control over creativity (Demos, 2016; Demos, 2017c; Haraway, 2016; Kirksey et al., 2013; Lee; 2016; Ricou, 2014; Robson, 2012).

In response to the accelerating crises of climate and biodiversity, "there is an increasing sense of urgency within multiple realms of visual culture" (Demos, 2016, 7). T. J. Demos (2016) explains that, while capitalist global systems are falling apart, there is "also a flourishing of contemporary artistic and activist practices that address and negotiate environmental conflict" (10). Although given the current trajectory that makes it seem inevitable that life on earth is headed for disastrous ruin (Bendell, 2018; Goldblatt & Watson, 2012; Johnson, 2019; Lenton et al., 2019), Demos (2016) argues that beyond this failing system there are abundant visions and practices of solutions and alternative ways of living sustainably and ethically (12). Many of these learn from and build upon land-based skills and knowledge systems of Indigenous peoples, rooted in millennia of land-based relationship (Coulthard, 2014; Jardine, 2019; Kimmerer, 2013; Simpson, 2014; Young, 2016). The projects described in the chapters that follow aim to contribute to this visioning and building of viable futures.

2.4: Apocalypse Survival Skills

In addition to having traditional ways of knowing and land-based knowledge, Indigenous peoples and people of other marginalized identities often have vital knowledge and survival skills applicable to surviving apocalypse. Berne and Raditz (2020) argue, in a pointedly titled article, that "To Survive Climate Catastrophe, Look to Queer and Disabled Folks." Piepzna-Samarasinha (2018) makes a similar argument in an article titled "To Survive the Trumpocalypse We Need Wild Disability Justice Dreams." These various apocalypses are the ends of worlds—such as the colonial genocide across Turtle Island (Coulthard, 2014; Hornborg, 2008; McMillan & Prosper, 2016; Simpson, 2017), and the ongoing violence of settler colonialism that continues to kill and to separate Indigenous peoples from land (Cole & O'Riley, 2010; Regan, 2010; Robinson & Martin, 2016). This was and is the ends of worlds, and yet Indigenous peoples resist and renew and revive communities and relationships and knowledges (Davis & Todd, 2017; Simpson, 2017). Alongside this colonial apocalypse is the related apocalypse experienced by those communities of people who were kidnapped across the Atlantic to have their labour and lives stolen by the slave trade (Wysote & Morton, 2019), and the ongoing apocalypses experienced by those who continue to have their labour stolen through exploitative capitalist processes, and their lives stolen by the huge toll of this exploitation and of white supremacist violence (Yusoff, 2018). Likewise, there are the apocalypses experienced by queer, trans, and non-binary folks who have lost and continue to lose large numbers in epidemics of virus and suicide perpetuated by homophobic and transphobic culture, or of white supremacist misogynist violence mostly against Black trans women (LeBel, 2020) and Indigenous women and children (NIMMIWG, 2019).

While many individuals have not survived, communities have and continue to survive through the cultivation of skills and building networks of community support.

As these authors argue, it is marginalized communities of queer, trans, Indigenous, people of colour, poor, disabled, and neurodiverse folks who are most likely to be disproportionately affected by climate catastrophes and environmental disasters (Berne & Raditz, 2020; Piepzna-Samarasinha, 2018). Further, these communities are those who have already survived apocalypses of various sorts, and have therefore developed skills for supporting mutual survival and flourishing in apocalyptic times (Berne & Raditz, 2020; Piepzna-Samarasinha, 2018; Simpson, 2017; Whyte, 2018). It is the same capitalist system that enacts violence on disabled bodies and marginalized communities that are not deemed to be "productive" that likewise enacts violence on more-than-human parts of the living world that are not perceived to be "productive" (Berne & Raditz, 2020, n.p.). But far from being useless, as Piepzna-Samarasinha (2018) argues, disabled folks are actually networks of brilliance and skills. While abled folks might sometimes find it difficult to make things accessible, disabled folks are resourceful and find a way, through "innovation and commitment to not leaving each other behind" (n.p.). Rather than viewing the need to provide for various access needs as an extra burden for activism work, Piepzna-Samarasinha (2018) explains, ensuring accessibility means that there are more people in the movement, and thus more ideas, energy, and skills. Further, including those who have been deemed by capitalism to be "unproductive" is a form of resistance to the capitalist system of reducing the living world to economic value (Piepzna-Samarasinha, 2018).

Informed by the knowledges and skills of marginalized people who have experienced all varieties of apocalypse, my methods explore how to enact the vital

survival skills of caring for more-than-human kin in ways that develop and tend to life-sustaining networks of relationship. This forms an anti-oppressive and intersectional method for visioning future worlds that understands survivors of apocalypse—apocalypses of colonial genocide, racism, ableism, homophobia, transphobia, misogyny—as worthy of more than just survival (Colebrook, 2018; Muñoz, 2009). Understanding that, as Nêhiyaw (Plains Cree) artist and scholar Erica Violet Lee (2016) asserts, "nothing and no one" is beyond hope (n.p.), such methods pay close attention to that which has been excluded from visions of hope. Offering attention and care resists capitalist modes of valuing by asserting the worth in that which cannot easily be molded into "resources" to support capitalist advancement.

Skills for surviving various apocalypses are place-based (Bawaka Country, 2016; Hall, 2017; Watts, 2013) and rooted in the particular (Demos, 2016). Embodied creative practice (Bartleet, 2013; Culhane, 2017) in land-based work supports developing the specificities of place-based knowledges (Riley & Hunter, 2009), thus fostering and modelling knowledge and skills that form a vital practice of tending to livable futures (Gan et al., 2017; Hall, 2017; Haraway, 2016; TallBear, 2017; Tsing, 2015). In the chapters that follow, I describe how I attend to learning, practicing, and sharing place-based skills as a way to archive "sustainable practices that support self-sufficiency and resilience" (Hall, 2017, 370). By engaging with land through an embodied creative practice of arts-based methods and cultivating land-based knowledge and skills, I work toward mending and decolonizing my own settler relationship with land in order to contribute to building possible habitable future worlds.

2.5: Arts-Based Methods

2.5.1: *Research-Creation*

In recognition of such emergent and open-ended creative research methods, the Social Sciences and Humanities Research Council of Canada (SSHRC) coined the term "research-creation." In an interview by Sarah E. Truman (2019), some of Canada's leading scholars of research-creation provide definitions of the concept. The responses depict an embodied and interdisciplinary method grounded in critical theories of intersectional power structures that often generates unexpected turns through collaboration with other actors (Truman, 2019). Natasha Myers explains that "research-creation is a mode of inquiry—a way of getting interested and involved in the world—that takes seriously embodied knowledge, craft, creativity, aesthetics, and practices of making as immanent to the processes of making knowledge" (qtd. in Truman, 2019, 227). As an embodied practice, research-creation brings research into dialogue within the contexts where the research takes place, resulting in what turns out to be a collaborative process (Bartleet, 2013, 445). Focused on process over product, it follows that this form of research can unfold in unpredictable ways as it changes in response to what emerges from collaboration, often resulting in multiple and unstable meanings (Bartleet, 2013; Leavy, 2015). As Myers explains, "sometimes, a new research question or a new insight is the outcome of a 'para-site,' a field site alongside my primary ethnographic research" (qtd. in Truman, 2019, 237). In my work, such "para-sites" are threads that may at first seem tangential to the project at hand, but turn out to be what drives the research along, as its focus changes from one chapter to the next.

Research-creation can disrupt and challenge "commonplace assumptions regarding scholarship in the academy" (Loveless, qtd. in Truman, 2019, 230), such as the assumption that taking an objective viewpoint ensures rigour in research—or that an objective viewpoint is even possible (Haraway, 1991). As Myers explains, "research-creation could be understood as an opportunity to free practitioners up from disciplinary norms of rigour, especially those … that avow distance and neutrality as means for securing objectivity" (qtd. in Truman, 2019, 240). This depicts research-creation as a method of creative and imaginative collaboration in the more-than-human community of ecosystem, that is conducive to cultivating place-based knowledge (Hall, 2017) and resisting capitalist colonial myths of human exceptionalism (Myers, 2017b).

In my own practice, my engagement with more-than-human actors in the unruly space of the living world means that I often end up engaged in such seemingly disparate projects as tracking marine debris and trying to make cord or paper from knotweed. What might at first look like an unruliness of practice is a result of being responsive to that which is emergent in an unruly world (Leavy, 2015; Schechner, 2002). These different projects result from following threads that emerge from the same place and purpose of tending to various forms of capitalist colonial destruction (Duclos & Criado, 2019; Lee, 2016; Puig de la Bellacasa, 2017; Rose, 2017; van Dooren, 2014). Despite this unruliness, as Bartleet (2013) argues, artful improvisation and a non-linear research process do not mean that artful autoethnography (or any other such arts-based method) is a free-for-all without direction. Rather, its grounding is in existing structures of artistic practices and aesthetic languages, as well as in the social context and experiences that form the purpose of the work (Bartleet, 2013, 451). The chapters that follow describe three projects that, at first glance, might seem to be entirely separate, however, they have all grown from the

same practice of material research with waste, weeds, and wastelands. They all are small acts of care aimed at developing a decolonial settler relationship with land toward building habitable futures.

2.5.2: *Performance*

One way of experimenting with, developing, and modelling such relationships is through a practice of performance as research (Culhane, 2017; Haraway, 2016; Kershaw, 2009; Schechner, 2002). Performance as research is an embodied method that can be a way of taking theory out onto the land (Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020), observing and feeling and experiencing what works or doesn't work and where there are tensions, which is then followed by reflection and adjusting theory accordingly (Bial & Brady, 2004; Gough, 2009; Moretti, 2017). This does not necessarily mean performance before a live audience, but can also include enacting and experimenting with personas (Schechner, 2002). In performance there is space for playing with tensions and ironies that might reveal fissures in established norms and ways of knowing, making it useful for transgressive political projects (Schechner, 2002). My own use of performance is not usually for a live human audience, although documentation and field notes generated from performance are often shared. In my work, performance is more iterative than spectacle—it works to enact alternative relationships by embodying different behaviours in relation to more-than-human others (Bial & Brady, 2004; Demos, 2017c; Giraud & Soulard, 2015). Performing theory generates feedback from the vibrant living world, and incorporating this input results in shifting and fluid research questions, insights, and opportunities (Haseman, 2009; Schechner, 2002). Thus, the method must also be fluid and dynamic, able to constantly shift and change in response to emergent situations and

new observations (Schechner, 2002), and it follows that performance as research, like other arts-based methods, can seem unstructured and hard to define (Haseman, 2009; Schechner, 2002). Haseman (2009) explains how this instability and unruliness unfolds:

> Many performance practitioners do not approach their creative research with a problem. Indeed, they may be led more by what can be described as "an enthusiasm of practice" … Frequently, they prefer to construct experiential starting points from which further practice follows; they begin practicing to see what emerges … This is not to say these performance practitioners/researchers do not operate without larger agendas or emancipatory aspirations, but they are seldom assisted by setting sharply specified problems at the outset of the project. Certainly the research question or problem will be able to be clearly specified at some point in the project, but with performance as research it must be recognized that problem definition may be unstable for as long as practice is ongoing. (56)

That is, this method can be difficult to define because it shifts and changes—not without direction, but in response to a shifting and changing world. This is how my work with plastic marine debris shifted from trying to answer a question about scale to exploring objects as artifacts, and then moving on to a different invasive, knotweed. Likewise, the findings in my experiments with knotweed led me to incorporating other materials, and all of this led me to witnessing and enacting care in a destroyed landscape.

2.5.3: *Autoethnography & Reflexivity*

These turns in research are also guided by reflexivity; that is, questioning how the researcher's social location relates to the context of the research and thus shapes knowledge (Berger, 2015; Jones et al., 2013; Pitard, 2017). As a form of research that looks toward the self, autoethnography can facilitate reflexivity by situating the researcher and research within social power structures (Berger, 2015; Jones et al., 2013, 30; Pitard, 2017). Autoethnography is distinguished from other forms of autobiographical writing by its use of personal narrative to make connections to cultural issues for the purpose of advancing research in that area (Jones et al., 2013, 22). As Jones writes, "I do

autoethnography less as a way to live and relate the story of research and more of a way *into* researching and storying living" (Jones et al., 2013, 19). This is also true in my work—that is, autoethnography is not just the product—a story to share with others—but it is also the method and the process of navigating the winding paths that research may follow (Ellis & Bochner, 2000). This facilitates embedding reflexivity in the practice (Jones et al., 2013), which I use to examine my settler identity in the context of my relationships with the more-than-human beings with whom I seek to make kin.

As is argued by Jones et al. (2013), autoethnography disrupts the norm of "privileg[ing] unreflexive claims to objectivity," which is "one of the most problematic notions in traditional social scientific work" (32-33). Objectivity, or, what Haraway calls the "god trick"—that is, the idea that, with the right technology, one can achieve disembodied and unsituated vision and knowledge—is not possible (1991, 189-190). It is the patriarchal colonial tradition of assuming the objectivity and default non-identity of the straight white western able-bodied cisgender man, while all other perspectives are marked by the bias of identity (Haraway, 1991). In resistance to this, autoethnography can provide transparency about the researcher's own experiences (Jones et al., 2013), while reflexivity reveals how social location shapes perspectives (Berger, 2015; Jones et al., 2013; Pitard, 2017).

A reflexive process contributes to a rootedness that strengthens the validity of knowledge (Jones et al., 2013; Pillow, 2010). Identifying the researcher's position in the web of the living world and in social power structures sheds light on influences to their perspective, and therefore also any limitations or strengths of knowledge that emerge from that perspective (Jones et al., 2013). This is especially vital in settler land-based work (Kovach, 2009; Ladson-Billings, 2000) such as my own, because otherwise, there is

risk of perpetuating colonial assumptions and biases (Ladson-Billings, 2000). Throughout my practice and the projects described in the following chapters, I engage in reflexive analysis of factors that contribute to my ability to access land in Mi'kma'ki, and how such privilege shapes my perspective. Rooted in place, time, and privilege and oppression of social location, a practice of reflexivity provides the necessary grounding to support the ability to imagine alternative worlds.

2.5.4: *Imagination*

Anthropologist Stuart McLean (2007) defines imagination as "an active component of experience and perception, engaged in a constant interchange with the material textures of the living world" (McLean, 2007). This describes a sort of imagination that is not adrift in space or untethered from anything real, but rather, is a practice of reflection and conceiving of how things might be different. Similar to brown's (2017) concept of emergent strategy, this sort of imagination, Culhane (2017) argues, has the potential to "force an alternate rendering of social lives, one that accounts for the forgotten, disappeared, hidden, and lost" (13). An imaginative creative practice, then, is a place to try out various imagined potentials in the real space of the living world and its web of relationships, and then build something new that actually works; that actually supports the web of the living world (Gan et al., 2017; Svenning, 2017). And this reimagining must be massive—as Ricou (2014) writes, "so massive and daunting are the environmental crises facing us—facing the earth—that nothing short of a massive reimagining, a shift in the imaginary, will work" (168). This is a daunting task, but understanding that such a big change is only made by collective smaller changes (brown,

2017), my work, in the three projects described in the following chapters, addresses this reimagining on the small scale and in the immediate present surroundings.

brown (2017) discusses the future world-shaping potentials of imagination, and how this might be mobilized to make change. She explains that creating change "isn't a matter of facts. It's a matter of longing, having the will to imagine and implement something else. We are living in the ancestral imagination of others, with their longing for safety and abundance, a longing that didn't include us, or included us as enemy, fright, or other" (brown, 2017, 21). This "ancestral imagination" that longed for "safety and abundance" created the system of capitalist colonial mass-production and consumption in order to provide that safety and abundance for some people, while exploiting other people, other creatures, and land (Nixon, 2016; Whyte, 2018). In many ways, I am a part of the group of people for whom ancestral imagination dreamed of safety and abundance. I am living in the world that my settler ancestors dreamed of, with abundant land and resources, safety from the elements, fossil-fuel enabled mobility around the planet, and the easiness and convenience and instant gratification of being able to purchase food at a store ready to eat, or even summon it to my door on a whim with only the use of a credit card and the internet.

Kyle P. Whyte, member of the Citizen Potawatomi Nation, echoes this, explaining that "many of the ancestors of today's [settler] allies designed the worlds we live in today to fulfill their fantasies of the future" (2018, 237). But these fantasies did not include Indigenous peoples in the safety and abundance (brown, 2017). They did not include Black people, or any other people of colour (Whyte, 2018). They did not include queer, trans, or non-binary folks or anyone who does not fit into binary gender roles or the heteronormative reproductive nuclear family structure that is mutually supportive with

capitalism (Berne & Raditz, 2020). They did not include disabled or neurodiverse folks or anyone who doesn't necessarily contribute to capitalist "productivity" (Berne & Raditz, 2020; Piepzna-Samarasinha, 2018). The ancestral fantasies that created this world structure also provided the myths to reinforce it (Whyte, 2018)—myths that those who are included are so because of their hard work, intelligence, and merit (Epp, 2012; Mackey, 2012; Moreton-Robinson, 2003; Regan, 2010; Wysote & Morton, 2019), while those who are excluded deserve to be because of inherent inferiority, defect, or lack (Whyte, 2018). Through myths of uninhabited lands available for the taking and myths of the benevolence of the settler colonial project, "settler ancestors gifted their descendants … worlds in which they could feel themselves innocent" (Whyte, 2018, 237). The task for settlers then is to step away from this fabricated innocence (Tuck & Yang, 2012; Whyte, 2018), undermine the myths, and recognize that the maintenance of these worlds is the cause of continued dispossession of land and life-ways for Indigenous peoples (Epp, 2012; Regan, 2010; Wysote & Morton, 2019), and everybody other than white able-bodied cisgender heterosexual settlers, and more-than-human relatives. The task is to contribute to imagining and building different futures that include everyone—the everyone with whom we need to collaborate to survive (Coulthard, 2014; Simpson 2017). It is then to imagine ourselves as ancestors, and be cognizant of what sort of future we want to have imagined for future generations (Naidus, 2016, 82). The three projects described in the following chapters are ways of reimagining worlds that look to those who have been excluded from the one that we are currently living in. Working with plastic waste, invasive plants, and wastelands, they envision worlds where what has been deemed waste or worthless is deeply valued and important. Learning from wisdom and survival skills grown from places of Indigeneity, queerness, disability, and

neurodivergence, these projects work to envision and build livable futures that include those in the wastelands, and those who are the wastelands (Lee, 2016).

Recognizing the myths upon which these worlds of settler ancestral imagination are fabricated is to recognize the ways in which these fantasies just don't work (Nixon, 2016). Where the myths crumble, the structure falls apart, and the gaps and holes are becoming even more apparent as time goes on (while they have been painfully obvious to those excluded from the fantasies all along) (Davis, 2017). While this ancestral imagination led to the provision of some sorts of safety and some sorts of abundance for some sorts of people, it is actually devoid of real safety or abundance. There is no real safety because capitalist colonial practices of exploitation, consumption, and destruction have brought us to having to consider the possible near-term extinction of humanity (Bendell, 2018; Goldblatt & Watson, 2012; Johnson, 2019; Lenton et al., 2019). There is no real abundance because most of us who live entangled in the capitalist system are greatly missing out on the abundance that surrounds us in the rich and diverse community of the more-than-human world while wanting insatiably for the sort of abundance that can be purchased from a store (Kimmerer, 2013). My research projects discussed in the following chapters result from a practice of looking for safety in more-than-human community and abundance in waste and in wastelands.

While in many ways I am one of those who are immensely privileged to be living in the futures of safety and abundance that my settler ancestors dreamed of, in other ways, as a young, queer, neurodivergent femme, I am excluded from these ancestral fantasies. I am also living, along with the rest of the world, in the spoils and wastelands of their delusions, and dreaming of alternate futures from the one we seem to be currently accelerating towards. These delusions include the ideas of human exceptionalism and

belief in a human ability to survive separate from responsibility to relationship with the rest of the living world (Kolbert, 2014). They include the idea that a linear economy of endless consumption and growth could even be possible on a finite planet (Mander, 2012), and the idea that some of us would be better off exploiting and treating our more-than-human kin as resources for consumption rather than as kin, family, and collaborators in a network of mutual support and survival (Kimmerer, 2013; Klein & Simpson, 2013; Robinson, 2014). As Ricou (2014) states, "industrial and post-industrial societies thought it possible to destroy others' habitats and still go on living. Now we must admit that it is not possible" (162). The settler task is therefore to undermine the myths that support these flawed and failed ancestral fantasies, and then, in collaboration and community, imagine and enact something different; something that includes the rest of us; human and more-than-human kin. Engaging with waste, weeds, and in wastelands, my practice works to enact alternative settler relationships beyond viewing more-than-human relatives as "resources" for consumption, use, and disposal as waste (Klein & Simpson, 2013).

If someone's ancestral imagination is what we are living in now, then, what brown (2017) proposes is that we too in the present can and are shaping the future with what we imagine and enact now. Anthropologist Jamie Saris asserts the importance not only of imagining a different present and future that includes all of us, but of also examining the sort of historical (and present) imagination that resulted in the world that we have now. "If we really believe that imagination is to be one of the midwives of 'another world,' then we are over-late in investigating how it is under-girding and reproducing the one in which we currently find ourselves" (Saris, 2007, 59). A creative and imaginative practice as a research method, like brown's (2017) concept of emergent strategy, is a practice of embodied imagining that brings ideas into practice, and through collaboration with the

web of the living world, shapes this practice to create new patterns that can become new realities, new futures, new worlds (brown, 2017; Demos, 2017c; Girard & Soulard, 2015). In my practice, the collaborators are more-than-human and vibrant material actors with whom I explore possible alternate relationships from the one shaped by the delusion of human exceptionalism. Looking to see the value and cultivate relationships in and with that which has been deemed worthless, the projects discussed in the following chapters work to develop new patterns of relationship in more-than-human community.

The creative and imaginative field of the arts is a vital place from which to do this reimagining. As Heather Davis (2017) writes, "what the arts are being called upon now to do … is to respond to this ecological crisis, to respond with the deep and vast knowledges of peoples who never bought into this story in the first place" (16). These are the knowledges that colonialism has tried to erase, including place-based knowledges of our roles within the more-than-human living world (TallBear, 2017). By performing something different, embodied creative practice has the capacity to make cracks in the facade of legitimacy that supports the capitalist colonial structure (Demos, 2016; Demos, 2017c). Artworks directed at this task, Demos (2017c) writes, "are materializing and performing ongoing cultural mutations and disjunctions that … are enacting the very rupture most needed within our petrocapitalist complex." By reconceptualizing waste and who and what matters (Gillespie, 2016; Thill, 2015), my creative practice works to make some of these ruptures and model behaviours and relationships that contribute to possible livable alternatives.

2.5.5: *Embodied Practice*

The violence enacted on so much of the more-than-human living world is in part facilitated by the privilege of unawareness that results from not having one's immediate survival dependent upon awareness of the surrounding environment (Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020). So and Pinar Sinopoulos-Lloyd, of the decolonial queer place-based skills education organization Queer Nature in what is currently known as Washington state in the Northwestern United States, teach land-based skills to support the development of marginalized peoples' relationships with land (Queer Nature, n.d.). They recognize that, because of systems of privilege and oppression, land-based survival skills are often inaccessible to Black, Indigenous, people of colour, queer, trans, Two-Spirit, non-binary, and disabled folks (Landau et al., 2020; Purdy, 2015; Queer Nature, n.d.; Rowland-Shea et al., 2020; Schelhas, 2002). Further, when framed by settler colonial perspectives, survival skills are often premised on ideals of hypermasculinity, rugged individualism, and dominance, which are most often destructive to the more-than-human living world that actually supports survival (Queer Nature, n.d.). Tracking is one of the skills that they work to reclaim by cultivating and teaching it as a practice with epistemological implications (Sinopoulos-Lloyd, 2016); that is, as a way of knowing, developing relationship, and becoming more accountable to more-than-human kin (Sinopoulos-Lloyd, 2016).

In many places, especially on present day Turtle Island where many top predators are either extirpated, extinct, or greatly reduced in numbers (Sandom et al., 2014; Svenning, 2017), humans are usually able to move freely about the land without worrying about attracting the attention of predators and becoming someone's next meal (Challenger, 2012; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020). Further, with the

usually available abundance of food from supermarkets facilitated by industrial agriculture and fossil fuel transportation (although this is not always the case, especially in some Northern and Indigenous communities where groceries are scarce and/or prohibitively expensive (Galloway, 2016)), most humans are usually free from worrying about tracking wild animals and plants in order to be fed (Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020). For me, this means that I can go rambling down a trail, paying attention only to my feet to avoid tripping over things, with negligible risk to my immediate safety. Despite how agile or quiet I think I am, I am loud and clumsy compared to most of my surrounding more-than-human kin, and I am not aware of the extent of my impacts on, or of what is happening in, the world much beyond the rocks and roots from which I leap to and fro. This has the effect of limiting my awareness of the many other beings who occupy this space, because they have fled from my large "field of impact" (Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020, 9), or hidden within my much smaller "field of perception" (Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020, 9).

This privilege of not having to be aware of the extent of one's impact is not usually available to the non-human beings with whom we share space (or don't share, as the case may be) (Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020). Neither is this privilege always available to some marginalized humans, who may need to use stealth for various reasons pertaining to safety and survival. Some may need to hide or escape from physical violence or captivity, while others may need to exercise a form of stealth by performing heteronormativity, normative gender, or being neurotypical in order to avoid being detected as queer or neurodiverse, and thus avoid experiencing possibly resulting discrimination or violence (@queernature, 2020). Practicing stealth, Sinopoulos-Lloyd & Sinopoulos-Lloyd (2020) explain, requires cultivating an acute awareness both of one's

own impact on surroundings as well as of the actions of the beings from whom one seeks to hide (9).

Tracking and increasing field of awareness, both in human social worlds and in the more-than-human world, as Sinopoulos-Lloyd and Sinopoulos-Lloyd (2020) argue, is an act of reciprocity toward those who have to maintain such awareness for their survival (9). This concept informs my work in the clearcut and blasting zone described in chapter 5, as I learned to track the more-than-human relatives who were displaced or had been lost, and the changes in the landscape as it transformed beyond recognition. While learning to pay closer attention through tracking was a form of reciprocity in itself, I also explored how this practice can lead to learning how else to better enact reciprocity through acts of care. This turned out to be a rich and useful place from which to learn to notice and build relationship with more-than-human relatives (Bjornerud, 2018; Matthews, 2017).

Tracking is about more than just naming and identifying paw and hoof prints. Everything leaves traces on the land, from the shift of tectonic plates folding and layering rock to the passage of a bee carrying pollen through a space (Moskowitz & Ottey, 2006 Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020). Glaciers scrape and gouge and polish bedrock and move massive amounts of rock, and forest fire leaves traces of charred wood and scorched rock in its path—a path that can be traced alongside its influencing features of topography, water, and winds. Industrial resource extraction replaces richly diverse ecosystems with even-aged monocultures, and leaves behind the all-consuming traces of destruction, waste, and pollution (Klein & Simpson, 2013). Centuries of colonialism and capitalism have left and continue to leave these deep traces on land on Turtle Island, and understanding the traces of colonialism and capitalist resource extraction on land is vital

to learning to read the land (Gan et al., 2017; Head, 2016; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020). Without recognizing these traces of colonialism, we may assume that the state of the land is natural or that the ecosystem is intact (Challenger, 2012; Parker, 2017). We then risk not noticing the devastating changes that have happened, and are therefore less attuned to or able to resist further such losses (Challenger, 2012; Parker, 2017). For settlers such as myself on unceded Indigenous land, learning to recognize and read these traces is vital to understanding how we are complicit in perpetuating the system of settler colonialism that continues to mark the land (Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020). In my creative practice, paying attention to the changes in a clearcut and blasting zone was a practice of working to become more literate in reading the layers of history embedded in built landscapes. By directly observing some of the ways in which the exploitative capitalist system causes destruction, this project explored possibilities for how to resist being complicit, and instead find ways to enact care and perform mending.

Coming to know and developing relationship with the beings around us, Kimmerer (2013) explains, makes people less alone and more at home in knowing a place of belonging in the web of the living world (209). But for settlers, seeking to find belonging on Indigenous land requires taking into account the implications of settler colonialism in order to avoid perpetuating colonial violence. Providing the example of nomadic and migratory species, Sinopoulos-Lloyd and Sinopoulos-Lloyd (2020) argue that one does not have to own land in the colonial sense in order to belong, nor does one have to grow up or stay in one place for a long time. Rather, Sinopoulos-Lloyd and Sinopoulos-Lloyd (2020) argue, belonging is about being embedded communities of support and interdependence. This kind of belonging that comes from being accountable

to other beings entails understanding how we affect and are affected by others, in order to understand ourselves as an embedded part of the living world (Bjornerud, 2018; Matthews, 2017; Svenning, 2017).

A lack of this understanding of land as home is what enables behaviours that are so destructive to the living world (Kimmerer, 2013, 207). Viewing the land as a commodity and as a place from which to extract resources allows so much extraction and destruction (Robinson, 2014; TallBear, 2017). Rather than treating land as a possession in the way that houses are considered possessions or commodities, a better perspective would be to think of land and more-than-human community as home, and as family (Moreton-Robinson, 2003). If settlers thought of ourselves as a part of a community of life-sustaining relationships (Shotwell, 2016), if we thought of land and the community of ecosystem as home, then we might be less inclined to cut down, blow up, and poison that home (Kimmerer, 2013). This sort of belonging is not an end goal that can be achieved after putting in some requisite amount of decolonizing and building relationship and community; rather, it is "a set of place-based practices" (Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020, 2). These are ongoing practices that include attentiveness and care toward supporting the survival and flourishing of more-than-human kin. Through active responsibility, these are practices of tending to the connections that make us kin with, at home in, and belong to the more-than-human world.

For settlers, this sort of belonging can, and should, be unsettling (Decter & Taunton, 2013; Regan, 2010; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020)—it disrupts settler colonial narratives about hardy pioneers who encountered an unforgiving wilderness and, through pure rugged strength and quality of character and sheer determination, fought to overcome forces of nature in order to survive (Epp, 2012;

Mackey, 2012; Moreton-Robinson, 2003; Regan, 2010; Wysote & Morton, 2019). This kind of belonging does not depend upon Indigenous erasure or patriotic narratives of the goodness and benevolence of settler nation-building. Learning land- and place-based skills that support survival resists the capitalist myth that basic survival requires buying things (Simpson, 2014). It defies the myth that a strong capitalist economy is necessary for a healthy and happy human population, and maybe begins to shift the meaning of "economy" away from exploitative capitalist definitions, and back towards its original meaning, from the same etymological origins as the word "ecology," from "oikos," or home (Naveh, 2000). Building webs of mutually supportive relationship with the vibrant and animate more-than-human world refuses the colonial myth of human exceptionalism and human superiority (Haraway, 2008; TallBear, 2017).

I take up these understandings of belonging in the following chapters as I work to develop an unsettled settler relationship with more-than-human kin in Mi'kma'ki. In the context of marine debris, plastic is matter out of place, and needs to be helped in finding its place of belonging. Likewise, with knotweed, through experimentation with different ways of working with and relating to this plant, I looked for places of belonging in potential relationship as alternatives to aggressive invasion. And in the clearcut and blasting area, by interacting with small specific features of landscape and performing small acts of care, this project looked for possible alternate settler relationships with land towards unsettling colonial ideals of mastery and control—that is, places of "unsettled belonging" (Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020).

2.6: Care

Inevitably, while tracking and paying attention to some of the traces of colonialism and resource extraction capitalism on land, we will come across places in various states of disturbance and destruction (Fredengren, 2018; Gan et al., 2017; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020; Svenning, 2017). As beings seeking to heal and tend to multi-species relationship, we must consider how these places require attention and care (Ricou, 2014; Rose, 2017). As Ricou (2014) asserts, the task is to "seek[] out disturbance and recognize[] that disturbance demands [our] empathy, [our] caring, and [our] comfort" (164). As is discussed further in Chapter 5, the concept of care is complex, and it is therefore important to be clear about what exactly is meant by care and how it is employed (Duclos & Criado, 2019; Haraway, 2016; Puig de la Bellacasa, 2017; van Dooren, 2014). Care can be enacted toward causes that perpetuate the harmful status quo capitalist colonial system that is accelerating the destruction of the web of the living world (Duclos & Criado, 2019; Puig de la Bellacasa, 2017). Care can be paternalistic, maintaining or reinforcing power relations (Puig de la Bellacasa, 2017, 9), and can be complicit in violence against that which it is intended to protect if it is rooted in misinformation or lack of information (Duclos & Criado, 2019, 2). To fail to analyze an enactment of care is to risk falling into some of these pitfalls. (Duclos & Criado, 2019; Puig de la Bellacasa, 2017; van Dooren, 2014). This leads to questions about how to enact care, towards whom, what it means to care as one who is entangled in the more-than-human living world as well as in the systems that are causing its destruction, and what it means to care for others on the edge of extinction (Puig de la Bellacasa, 2017, 13; van Dooren, 2014, 291).

The projects described in the following chapters perform acts of care as a method of working to imagine "how things could be different" (Puig de la Bellacasa, 2017, 17). Chapter 3 outlines a project in which I enact care toward plastic marine debris as a material with such longevity that makes it a necessary collaborator in imagining viable future worlds (Robson, 2012). In chapter 4, I outline how I try to imagine knotweed as potential collaborator rather than adversary. And in chapter 5, I explain how I enact care in a clearcut and blasted landscape (Tsing, 2015) as the embodiment of a critical practice of questioning how to engage in a decolonial settler land-based practice of forming reciprocal relationship with more-than-human kin on unceded Indigenous land. Through these sorts of experiments, as Thom van Dooren (2014) argues, "care is a vital practice of critique," and conversely, "critical work [is] in itself an act of care" (293). This work of critique, then, and of writing and sharing ideas is also a form of care that aims to spread curiosity and concern about destruction in multi-species entanglements of the living world (van Dooren, 2014, 293-294).

In this mobilization of the term, care becomes an act of shaping new worlds (van Dooren, 2014, 294). It also becomes a strategy of resisting certain definitions of waste. Caring in and for such places defies the label of "waste," asserts worthiness, and asserts that "there is nothing and no one beyond healing" (Lee, 2016, n.p.). As Lee (2016) argues, "for those of us in the wastelands—for those of us who are the wastelands—caring for each other … is refusing a definition of worthiness that will never include us" (Lee, 2016, n.p.). Enacting care in such places of waste and neglect—with what Lee (2016) describes as a "destabilizing gentleness"—refuses and destabilizes definitions of worth that uphold the system that causes such destruction in the first place (n.p.). This sort of gentle care destabilizes the dominant structure of uncaring that makes waste of

vibrant and diverse multi-species entanglements and is a practice of world-building and piecing together new worlds—worlds that include everyone and go beyond just survival—from the scraps and debris of the current world (Lee, 2016, n.p.).

Sometimes it may seem that enacting care in such places requires having hope for the future. But confronted with so much loss and destruction that show no sign of letting up, such hope isn't always easy to find. But, as Haraway (2016) explains, hope for the future is not necessary for "staying with the trouble" (1). Rather, Haraway (2016) explains, "staying with the trouble requires learning to be truly present" in seemingly hopeless situations, and this is often a prerequisite to finding or making hope (1). Regarding hope, Lee (2016) writes that "to provide care in the wastelands is about gathering enough love to turn devastation into mourning and then, maybe, turn that mourning into hope" (n.p.). Understood this way, hope is therefore not an affective prerequisite to caring, but an active practice of embodied and critically engaged care toward more-than-human relatives (Head, 2016).

In the chapters that follow, I explore what it means to be present, mourn, care for, and develop kinship in places of destruction, waste, and neglect, even and especially when hope is elusive. My work with plastic waste might appear to be pointless given the hopelessness of making any measurable difference to immense scale of the global problem of plastic pollution. Likewise, working with invasive knotweed may appear hopeless as a strategy for its eradication. But, turned toward material responsibility and more-than-human collaboration, these projects look for hope in working to re-situate these materials as collaborators in building livable futures. Finally, my work in the blasted landscape (Tsing, 2015) of a former forest seemed at first like an exercise in futility. In the absence of hope for the forest and creatures who had already been lost, I

turned instead toward paying attention to how the changes were layered and remembering what was being and had already been lost (Bjornerud, 2018; Bubandt, 2017; Gan et al., 2017; Matthews, 2017; Svenning, 2017)—as a way of insisting that that which was being lost mattered (Butler, 2004; Gillespie, 2016). While this may not have changed the outcome for those who had already been lost in this particular landscape, this sort of project may generate hope in fostering relationships that mend tears in the life-supporting web of the living world.

2.7: Moving Forward: Making Kin with Waste, Decay, and Loss

In the chapters that follow, I describe how I employ the various methods and concepts that I've described here through a creative practice. This practice works to creatively experiment with ways of enacting care in the more-than-human living world, in waste and in places of decay and loss, with the aim of mending tears in the web of the living world (Conley, 2016; Haraway, 2016; Puig de la Bellacasa, 2017; Rose, 2013). These projects are iterations of the same larger project of decolonizing settler relationship with land and the more-than-human living world. This includes working to unsettle narratives of human exceptionalism and colonial entitlement to land (Epp, 2012; Moreton-Robinson, 2003) in an ongoing, land-based, reflexive settler practice of learning how to be responsible to and actually make kin with more-than-human relatives (Haraway, 2015; Haraway, 2016; Hurley & Jackson, 2020). Through working with marine debris, invasive knotweed, and with elements of loss in a clearcut and blasted landscape (Tsing, 2015), this forms a critical practice of research-creation that responds to the vital and urgent need for reimagining and then building habitable futures from present colonial capitalist ruins (Tsing, 2015).

In Chapter 3 I describe my use of arts-based methods to interrogate marine debris for stories about the entanglements of this material with the living world (Liboiron, 2018a; Thill, 2015). By collecting and curating marine debris objects as artifacts, I look to track patterns and see how plastic highlights the interconnectivity of the whole of the living and material world (Liboiron, 2018a; Thill, 2015). I recount performing levels of meticulously small detail on a scale seemingly incongruous with the enormity of the scale of marine plastics in a performance of what feels like endless heavy work that must be done towards building a livable future on this planet. Performing these acts of futility was an experiment in finding out what it means to enact responsibility toward more-than-human kin by enacting care (Lee, 2016; Ricou, 2014; Rose, 2017)—for all who live with the effects of capitalism's addiction to disposable plastics, as well as for plastic material itself. I outline this arts-based exploration through the project's evolution as the questions changed and it became a practice of curating collections of artifacts that tell the story of the failure to materialize human exceptionalism. In Chapter 4 I outline how I used these same methods with invasive knotweed, hoping to find ways in which its abundance might actually be a gift rather than just an out-of-control problem (Kimmerer, 2013). As knotweed enacted material agency and resisted my efforts to shape it according to my will, I describe how I shifted my tactics, resulting in the project unfolding differently from my initial vision. The results and outputs of an art practice over two months spent fighting with knotweed included no great works of art, but rather, and most importantly, it resulted in learning and discovery.

Finally, in Chapter 5, I discuss how I used arts-based methods to grapple with how to be responsible and enact care in a clearcut and blasted landscape (Tsing, 2015) as someone who is complicit and entangled in the systems that were the cause of the

destruction (Bjornerud, 2018; Demos, 2017a). I chronicle how I practiced spending time with, observing, tracking, and documenting changes as the landscape transformed from a forest to flattened expanse of crushed rock as a way of insisting on the value and importance of the small, neglected, and seemingly insignificant things. I describe how, through performances of care and observation, I aimed to contrast and counteract the uncaring brute force of the tree-mowing machines, bulldozers, and explosives (Lee, 2016).

The projects described in the following chapters are iterations of an arts-based practice that aims to decolonize settler relationship with the more-than-human living world in order to move toward survivable post-Anthropocene futures (Gan et al., 2017; Pictou, 2019; Prosper et al., 2011). These projects are a part of the ongoing work of decolonizing and resisting the capitalist causes of current ecological crises (brown, 2017; Davis, 2017; Demos, 2017b; Demos, 2017c; Haraway, 2016; Head, 2016; Rose, 2017; Tsing, 2015). This involves ongoing reflexivity to identify how my own settler identity affects my perspective and knowledge (Berger, 2015; Hurley & Jackson, 2020; Pitard, 2017). Focused on process over product (Gough, 2009), this method takes direction from that which is emergent and evolving in the more-than-human living world and non-living yet animate world (Alaimo, 2016; Bennett, 2010; Chen, 2012; Robinson, 2014; TallBear, 2017). It includes learning about the complexities and specifics of place (Bawaka Country, 2016; Hall, 2017; Watts, 2013), and my particular human-settler-artist-scholar role in the web of multi-species entanglements in Mi'kma'ki. It is the work of unlearning human-exceptionalism-informed behaviours in order to learn how to instead move into reciprocal relationship with the more-than-human beings with whom our survival is interdependent (Haraway, 2008; McMillan & Prosper, 2016; Robinson, 2014). And, as a

being in relationship, it involves enacting a place-based ethics of care for those more-than-human kin who are on the edge of loss or extinction (Conley, 2016; Haraway, 2016; Lee, 2016; Puig de la Bellacasa, 2017; Rose, 2017), even in the face of potential futility.

The following chapters detail an example of an arts-based method of forming a decolonial settler land-based practice of small acts of care that tend to future livable worlds. Through paying attention and staying with the present troubles of destruction of the living world, these projects form part of a creative practice that works to decolonize, decapitalize, and rebuild and mend broken relationships with more-than-human kin. This forms an ongoing unsettled settler practice of working to come home to webs of more-than-human kin in ways that support the flourishing of vibrant multi-species entanglements in present and future worlds.

Chapter 3: Ocean Treasures: Anthropocene Artifacts

3.1: Introduction: Collecting, Noticing

For the first few years of my PhD program, I had a dedicated habit of collecting marine debris from the water and from shorelines in Mi'kma'ki. This practice of gathering, documenting with photographs, lists, and sometimes weight, and then sharing these images and inventories on social media, endured for about five years. The concept was that this would be an ongoing performance to highlight the unending tide of "ocean treasures" to be collected. But, after five years, tired of this level of dedicated collecting and often very tedious attention to plastic detail, it seemed that this performance had sufficiently made its point about the impossibility of cleaning up marine debris. The not-quite culmination of this project was a show at Nova Scotia College of Art and Design Univewrsity (NSCAD)'s Anna Leonowens Gallery in July of 2019 titled *Ocean Treasures: Anthropocene Artifacts.* For this show, I covered the walls with the hundreds of images of marine debris collections, and I filled the gallery space with some of the things I had kept, arranging like items together, and displaying objects on plinths and under vitrines to position them as precious artifacts in a museum-like setting (Figures 3.1-3.2).

Figure 3.1: Ocean Treasures: Anthropocene Artifacts. Anna Leonowens Gallery, Halifax, July 17, 2019.

Figure 3.2: Ocean Treasures: Anthropocene Artifacts. Anna Leonowens Gallery, Halifax, July 17, 2019.

In the title of the show, I used the term "Anthropocene" to locate these artifacts as belonging to this era of endless capitalist expansion, colonization, mass-production and consumption, and mass waste-making (Davis & Todd, 2017; Gan et al., 2017; Haraway, 2015; Moore, 2015; Weeks, 2015). As discussed in Chapter 1, uncritical use of this term functions to perpetuate human exceptionalism through sole focus on the human and also to erase the uneven ways in which capitalism and colonialism distribute wealth and harms along striations of privilege and oppression (Davis & Todd, 2017; Gan et al., 2017; Haraway, 2015; Mirzoeff, 2018; Moore, 2015; Myers, 2017a; Parikka, 2015; Yusoff, 2018). I perhaps could have used one of the many other proposed terms in my title, but ultimately decided to use "Anthropocene" because of its common usage and wide recognition (Adams, 2021; Anthropocene Working Group, 2019; Crutzen & Steffen, 2003; Davis & Todd, 2017; Gan et al., 2017; Haraway, 2015; Haraway, 2016; Kolbert, 2013; Maslin & Lewis, 2015; Mirzoeff, 2018; Moore, 2015; Myers, 2017a; Parikka, 2015; Yusoff, 2018; Zalasiewicz et al., 2017; Zylinska, 2014). I had hoped that, by honouring and elevating the artifacts through presentation (Robson, 2012), their stories of the disastrous delusion of human exceptionalism (Bjornerud, 2018; Davis, 2017; Haraway, 2016; Rose, 2017; Shotwell, 2016; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020) would be highlighted. I had hoped that the artifacts and their stories would cause viewers to reflect on the material agency (Alaimo, 2016; Bennett, 2010; Chen, 2012; Robinson, 2014; TallBear, 2017) of plastics and consider personal relationship and responsibility to these materials (Hawkins, 2021) that have such deep time implications (Davis, 2015a; Liboiron, 2015; Longobardi, 2015; Robson, 2012; Weisman, 2007), and perhaps inspire imagining alternative structures for building livable futures (brown, 2017; Demos, 2017b; Demos, 2017c; Haraway, 2016; Head, 2016; Rose, 2017; Smith, 1999;

Tsing, 2015). Perhaps one of the other proposed terms could have more effectively and accurately evoked the complexities of the source of these artifacts, but, as discussed in chapter 1, the term "Anthropocene" is provocative of what are often vital considerations of how things could be different (Gan et al., 2017; Davis & Todd, 2017; Head, 2016).

Working with marine debris was a method of exploring possible ways to enact settler responsibility to land by being responsible to plastic waste that results from capitalist and colonial exploitation and causes harm in the form of pollution (Liboiron, 2017; Liboiron, 2018b; Waldron, 2018), at a time when it is predicted that plastics could outweigh fish in the ocean by 2050 (Jambeck et al., 2015; World Economic Forum, & Ellen MacArthur Foundation, 2015). Max Liboiron (2018b), who is Red River Métis/Michef, explains that the term "waste colonialism is used to describe the transboundary disposal of a variety of hazardous and toxic wastes" and is "almost always about the transboundary movement of waste from areas of privilege and affluence to areas with lower economic status and influence" (n.p.). This happens in part because waste tends to accumulate in places where there are less resources to remove it and relocate it elsewhere (Robertson, 2016, n.p.). While I did not travel to different places to compare types and volumes of marine debris in areas of more or less socioeconomic privilege, I did see how plastic in the ocean travels, often out of sight and out of mind for those who may have used it and disposed of it, to occupy space and relocate toxicities and other dangers elsewhere.

Even when plastic waste is not elsewhere, but rather right here, I found that often we don't see it, having learned to ignore it (Humes, 2012). I would sometimes receive comments from clients on kayak tours or strangers walking on beaches, expressing surprise at the amounts of garbage I had collected, when they had noticed little or none.

Receiving these comments, I learned that the ability to see marine plastics—or, perhaps more accurately, unlearning the ability to ignore and disregard it—is a skill that often must be cultivated (Conley, 2016; Humes, 2012; Odell, 2019; Thill, 2015; Tsing, 2015). Rather than just collecting garbage and putting it to the curb for garbage collection, once again out of sight and out of mind, it was crucial to this work to resist its continued erasure. I did this by documenting collections through pictures and lists posted to social media, as well as photographs of some of the items in situ (Figure 3.3), as I had found them, and by displaying many of the items in this exhibit of artifacts. By positioning these castoff items as artifacts, I aimed to focus attention and scrutiny on the western systems of capitalism and colonialism that created and distributed them, and associated habits of consumption, exploitation, and waste (Davis, 2015b; MacLatchy, 2020; Strasser, 2013; Thill, 2015).

Figure 3.3: Balloon mixed with seaweed. May 24, 2018.

The numbers and volumes of marine debris objects that I included in the show were only a small fraction of all that I had collected. I had put the majority of what I collected from the ocean and shorelines on the curb for garbage pickup. From each collection I would usually save a few most-commonly-found things that would add to specific collections (e.g. bottle caps, lobster bands, lobster trap tags, pieces of rope, shotgun shells, plastic cutlery, etc.) I wondered what the patterns of these most abundant types of objects might tell me about what is being discarded or lost, and how. Judith Selby Lang, American marine debris artist, explains that patterns in marine debris "show by their numbers and commonness what is happening in oceans around the world" (qtd. in Freinkel, 2011, 127). The patterns presented by many of the items that I found pointed collectively to stories about how they came to be adrift in the ocean. Was someone intentionally or carelessly discarding giant balls of tangled long-line in a certain area somewhere not far offshore? Had there been a loss of one or more shipping containers containing furniture or something with cushioning foam? Had someone dropped crates of new and unused beige lobster-claw bands overboard somewhere nearby? Although I didn't find definitive answers to these questions, the patterns of specific commonly found objects indicated that something had happened that I wouldn't have otherwise known to wonder about.

In addition to saving common items for specific collections, I also kept some of the more unique, interesting, or colourful items. What I put to the curb were things that were also common but seemed too dirty, toxic, or unruly to hold onto. These included: film plastics (e.g. wrappers, plastic bags, packaging, and shredded pieces of these); rope in pieces too small or in quality too weathered or frayed to be useful; foam of all varieties; fabric; gooey remains of latex balloons; questionably recyclable plastic

containers; coffee cups; lighters; broken buoys and buoy pieces; lobster-trap pieces, bait bags, and small lobster escape hatches; miscellaneous bits and pieces of unidentifiable hard plastics; plastic bottles and bottle pieces (I hoped some might still be recyclable); electronic waste leaking questionable oily black liquids; oil buckets and jugs; and all kinds of miscellaneous things too few to collect and too mundane to keep (e.g. shop-vac or vacuum cleaner parts, windshield wiper blades, broken plastic shovels, lightbulbs, pieces of plastic furniture, hard hats, pieces of car bumpers…).

I spent weeks leading up to the show scrubbing individual bottle caps and lobster bands and lobster trap tags and plastic cutlery and shotgun shells with a toothbrush, and I thought about the care that I was giving to each object (Figure 3.4). These objects had all been deemed worthless, trash, and thrown "away," and here I was, spending countless hours scrubbing them clean. As I cleaned the collection of marine debris boots and shoes, it occurred to me how ridiculous this was. The boots and shoes were filled with sand, seaweed, dirt, and dead and rotting things, and, they were someone's old shoes. I cleaned all of this out, washed and scrubbed them, and in some cases where there were impossible-to-reach places I baked the shoes to kill any potential insects that would be unwelcome in an art gallery. Was I wasting my time? Who, in their right mind, would spend their time cleaning garbage, and why?

Figure 3.4: Cleaning. May 31, 2018.

The totality of things kept became so massive that I could not fit it all in the gallery. Many boots and shoes were omitted from the show, as well as heaps of rope, collections of fishing crates, milk crates, big plastic buckets, plastic straps, bait bags, small lobster escape doors and plastic hoops from lobster traps, rubber gloves, and other miscellaneous interesting plastic items. It took a few carloads and a trailer to transport all of the things that I did include in the show to the gallery, and it took two days with help from many people to install the show. Throughout all of this, I occasionally thought incredulously about how I had managed to convince that many people to spend that much time helping me meticulously arrange garbage and pictures of garbage in a gallery.

3.2: Reactions

3.2.1: *Ocean Advocacy*

There was a wide range of reactions from people who viewed the show. Many people were NSCAD folks who were regular attendees of openings, while others were people I knew from kayaking or other ocean advocacy avenues—some of whom had taken part in or been present for some of my collecting efforts, or who were also engaged in marine debris related work of their own. Many people who saw the show reacted by thanking me for all of my efforts at cleaning up the ocean, much as many participants on kayak tours or strangers who saw me dragging debris along shorelines would often thank me. As nice as this is, I am not under the delusion that my efforts made much of a difference at all toward ridding the ocean of plastic garbage, nor that "cleaning up the ocean" is even possible (Liboiron, 2015).

As Liboiron (2015) explains, some attempts to do so may actually cause harm, because "many wastes are inextricably part of their contexts. Marine life lives on plastics, and plastics exist inside marine life" (n.p.). Another reason that it is impossible to clean up is that the majority of plastic in the ocean is in the form of microplastics, too small to be captured (Law, 2017a, 10). Further, as Bennett (2010) explains, an object "can never really be thrown 'away,' for it continues its activities even as a discarded or unwanted commodity" (6). That is, the place called "away" to which we send our discards does not mean gone. Because plastics and other pollutants persist in time regardless of where they're located, cleanups can only ever be exercises in rearranging toxic materials in space (Gray-Cosgrove et al., 2015, n.p.) or in time (Liboiron, 2015). Because landfills "will eventually erode or be covered in water," relocating plastic waste to landfills "is an

act of deferring pollution, not stopping it" (Liboiron, 2015, n.p.). Moreover, Liboiron (2015) argues that attempts at techno-fixes such as the Ocean Cleanup Array—a giant floating plastic-collecting contraption—"divert money and attention away from ceasing, mitigating, and slowing the creation of plastic disposables in the first place" (n.p.). Given that the growth of plastic production has far surpassed the growth or effectiveness of capacity for recycling or otherwise managing waste (Borelle et al., 2020; Jambeck et al., 2015; Law, 2017b), the most effective measure to address the problem would be to stop the flow of plastic pollution at its source, rather than hopelessly trying to recapture it all once it has been released (Law, 2017b; Liboiron, 2015).

I am one of many artists who have created work using marine debris in response to this crisis. Mexican artist Alejandro Duran creates colourful earthwork installations that show plastic debris, found on the coast of the Sian Ka'an protected area in Mexico, appearing as part of the landscape (2010-2011). Duran's works are aesthetically appealing, but the plastics that appear to flow and grow and take over the landscapes blatantly confront viewers with the reality that various ocean and shoreline environments are inextricably entangled with and increasingly composed of plastics. Australian-Canadian artist Lyndal Osborne explores a similar theme in tableaus composed of plastic fishing debris, rocks, shells, and driftwood that depicts what look like landscapes viewed from above (2012). These topographies of mixed materials compel viewers to contend with the ways in which plastics are inextricably part of land, re-shaping and re-making familiar topographies. Sculptor and researcher Kelly Jazvac presents specimens of "plastiglomerate," a plastic-sand conglomerate that results from beach fires (Robertson, 2016). These ready-made pieces show plastic literally becoming one with rock, becoming part of the geological record, underscoring how inextricably it is now part of every

environment, and is therefore impossible to clean up (Jazvac & Corcoran, 2017; Robertson, 2016).

My own practice of collecting marine debris began from a place of questioning the seeming futility of individual actions against the scale of a problem so enormous, and wondering if and how it would be possible to enact care in coastal environments. Indeed, as I persisted in collecting ocean plastics and accumulating collections, photographs, and lists, the amount of plastics that I continued to find along the same shorelines did not appear to change. Ultimately the practice was less about cleaning up and more about discovering the stories that marine plastic objects had to tell. But, many people understood the display as an awareness-raising effort to communicate the message that marine debris is a big problem and that we should all help to clean it up and try to use less plastic in the first place. The show came at a time when public awareness about marine debris seemed to be on the rise. It was just over a year after, on Earth Day, April 22, 2018, Catherine McKenna, then Minister of Environment and Climate Change Canada, had made an announcement that the federal government would be inviting input from the public about ways to address marine plastics (Davie, 2018). In addition to attention on reducing consumption of single-use plastic shopping bags, plastic straws had recently been a focus of much campaigning about the perils of ocean plastic (Environment and Climate Change Canada, 2022). Walking on downtown Halifax sidewalks, one could often spot people sipping drinks through paper straws from plastic cups. Understanding this focus on individuals refusing select small items as a distraction from the bigger issue of an economy dependent on the use of disposable plastics (Davis, 2015b; Liboiron, 2013, 11), in the gallery I placed my collection of plastic straws and straw pieces, which amounted to maybe two big handfuls, on a plinth next to the pile of big balls of tangled

fishing line, which towered over the straws (Figure 3.5). A couple of people who already worked in the field of ocean advocacy and research addressing marine debris noticed this juxtaposition, and one person suggested that it would have been helpful for interpretation to have some sort of informative signage about the perils of plastic, pointing out the juxtaposition between the scale of the straws and the scale of everything else. I hadn't included any such signage or rhetoric about the giant problem of plastic pollution and marine debris in the exhibition, thinking that this was already quite obvious and not wanting to detract from the presentation of the objects as fascinating artifacts with stories to tell about the civilization that created them (Davis, 2017; Haraway, 2016; Rose, 2017; Shotwell, 2016). I didn't want to provide an obvious and simple explanation for all of this—there is a lot of plastic in the oceans, and it is causing harm—lest people stop there without considering the multitude of other stories present in the objects.

Figure 3.5: Straws and fishing line. July 17, 2019.

3.2.2: *"Where is the Art?"*

One friend who attended the show knew that I often make things from marine debris materials and was evidently expecting to walk into a gallery full of such art pieces. Upon entering the gallery and seeing just the objects, unaltered (other than cleaned and arranged), they asked "where is the art?" Worried that they might think it was a bit of a lazy excuse for an art show—just fill the gallery with garbage instead of actually "making" anything from it—I explained the amount of work that went into the show. I then explained that displaying a collection of the miscellaneous objects that I've made from marine debris (e.g. baskets, wall hangings, doormats, coasters, trivets, plant hangers, little woven jellyfish, etc.) would perhaps convey a different message. While indeed we ought to work with the waste materials that surround us to make what we need rather than infinitely extracting more resources on a finite planet, I wanted to provoke thinking beyond the capitalist system that attributes value through "usefulness" in economic terms. As Maya Weeks (2017) explains, "blue capitalism [is] the aquatic parallel to land-based green capitalism […] Blue capitalism produces commodities within the same infrastructure of contemporary consumerism that has gotten us into this mess" (n.p.). While I don't mass produce consumer goods from marine debris or make a profit by promoting a product made from marine debris as a solution to ocean plastic pollution, I worried that presenting the materials in altered forms from how I found them might distract from what stories the objects already had to tell. Like Jazvac's readymade specimens of plastiglomerate (Jazvac & Corcoran, 2017; Robertson, 2016), the objects that I displayed did not need any alteration from me to be able to portray their messages—they only needed to be given their due attention.

Although in many ways the careful treatment of objects that have been classified as trash, such as in the above examples of artists working with marine debris (Duran, 2010-2011; Jazvac & Corcoran, 2017; Osborne, 2012), seems incongruent and strange, it is not something new. Susan Strasser (1999) explains that "ragpickers" have been described as archivists, cataloguers, and cultural historians (18), and that "archaeologists now analyze American disposal habits using artifacts preserved in landfills" (272). Humes (2012) explains that trash is "the true object of archaeologist lust because it represents the unvarnished story" (181) and "what we say about ourselves … is never as honest or as revealing as what we throw away" (161). And trash does not need to be old to be artifact—it can be used to study "evidence of consumer behaviour," (Humes, 2012, 162), which can sometimes find information that contradicts what social demographic surveys find about the same subjects (Humes, 2012).

In addition, once it's in the ocean, plastic garbage can provide information about ocean currents by how and where it moves—depending on buoyancy, shape, and therefore how much it interacts with wind versus water currents, how long it takes an object to travel from one place to another in this way, and how different materials weather over time (Ebbesmeyer & Scigliano, 2014; Weisman, 2007). Plastics in the ocean also tell stories about how intertwined and interconnected these currents are with human activities, with the capitalist system that resulted in the creation, use, and disposal of so much plastic, and of the interactions that happened along the way (Shotwell, 2016). Ebbesmeyer describes beachcombers as "the keepers of the ocean's memory, sifting and sorting the chaotic surfeit thrown up by waves and tides, transmuting trash into artistic and scientific gold " (2014, 74-75). This may be true, but I would suggest that the other way around might make even more sense. By regurgitating plastic and causing plastic to

continue to show up just about everywhere and refusing to let practices of consumption and disposal of plastic continue without confronting us with our waste, it is the ocean that is the keeper of society's memories that so many of us have tried to put out of sight and out of mind. Beachcombers, then, are those who pay attention to and interpret the patterns and stories in objects that have been sifted and sorted by waves and tides (Ebbesmeyer & Scigliano, 2014; Thill, 2015).

But to answer my friend's question, I explained that, while a display of objects made from marine debris could certainly have been a body of work for a show, it would have been a different show—one about transforming waste into not-waste in order to resist dependence on the capitalist economy for new materials and to work toward building livable futures from the ruins and rubble of the present (Demos 2017c; Lee, 2016; Tsing, 2015). I explained that I was first interested in inviting others to learn along with me from the stories embedded in these objects as artifacts, as I found them: stories not just about scale or about individual consumer choices (Ebbesmeyer & Scigliano, 2014; Humes, 2012; Strasser, 1999; Thill, 2015; Weisman, 2007), but about interconnectedness and the need to relate with plastic differently (Davis, 2015a; Robson, 2012; Thill, 2015). I told my friend that I had displayed the objects as artifacts in order to highlight the patterns and stories contained within the objects themselves—and that that was where "the art" was located. (They seemed somewhat convinced by my explanation, but still a bit disappointed.)

3.2.3: *Waste and Desire*

Another reaction to the show came from my mother, who had generously travelled to Kjipuktuk to help me install the show and to attend the opening. Somewhere in the

midst of the second day of many long hours of installation, while she was sitting beside a plinth and arranging bottle caps, she sighed and said, “when you have kids, nobody tells you that someday you’re going to be sitting in an art gallery arranging garbage in rainbow order” (Figure 3.6). She is right; I’m sure no parents-to-be are warned about the possibility of finding themselves in this scenario, nor advised on how to prepare. It does seem a bit strange to be taking such care with garbage and putting it in an art gallery, and I’m sure this was not quite what she had envisioned when, as a child, I told her that I wanted to be an artist when I grew up—or even when, a couple months earlier, I had told her that I’d be having an art show. My mother’s comment recognized the incongruence between the things that we think of as garbage and the things that we choose to put on plinths and under vitrines in an art gallery. It seemed strange to be treating garbage with such care and giving it so much attention, the way one would treat precious artifacts. But, because garbage is artifact, the real strange thing is why we create and are so careless with so many artifacts (Davis, 2015b; Strasser, 2013; Thill, 2015)—as well as the materials, earth, labour, and environmental costs that went into their making—in the first place (Humes, 2012; Strasser, 1999).

Figure 3.6: Bottle caps. July 17, 2019.

Many other marine debris artists also work with this incongruence in order to shift relationships with waste. Aurora Robson, American-Canadian marine debris artist and educator, explains her processes of collecting, cleaning, and sorting plastic from Kamilo Beach in Hawaii, as well as the process of creating a sculpture named after the beach (2012). “I have this opportunity to work with all kinds of plastic, that needs a home. It needs to be elevated. It needs people to recognize that it’s going to last for a very long time” (Robson, 2012, 2:39). Working with, highlighting, and honouring the colourful, translucent, and light-catching qualities of plastic waste, Robson “elevates” this material from a worthless, dirty, and a toxic nuisance and mess, to something monumental, beautiful, worthy of respect and reverence (Robson, 2012). She does this not by denying or ignoring its dangerous and devastating impacts, but by understanding these impacts on a more immediate level, and therefore developing a relationship of care with the plastic debris in contrast to the usual disgust (Lee, 2016; Robson, 2012). This example

demonstrates that no material is inherently waste or worthless, but rather, value is determined by how material is categorized and situated (Strasser, 1999). By being responsible to and working in collaboration with the vital qualities of plastic materials (Hawkins, 2021), Robson's work shows that it is possible to change the meaning of a material through the ways in which we act toward it. The care with which Robson considers and treats each little "piece of plastic may seem futile against the backdrop of" (MacLatchy, 2020, 49) such a sheer volume of plastic waste needing care and attention (Borelle et al., 2020; Jambeck et al., 2015; Law, 2017b; MacLatchy, 2020), or it might seem like the wasted energy of an eccentric artist who cares too much about a few worthless pieces of garbage.[2] I have certainly received a few reactions from people who have seen me collecting marine debris and been perplexed as to why I would do such a thing; one person even asked me if I was doing hours of community service as punishment for some crime. But these acts of great caring towards these small and seemingly insignificant things are the point: they pose vital questions about what and who matters, and about human relationships with and responsibility to material (Hawkins, 2021).

While works such as Robson's (2012) and mine can and do make direct and concrete impacts, no matter how small, more importantly these are acts of imagining that have the potential to shift attitudes and other imaginations about how care and respect are

[2] Phrases from a previously published book chapter listed below. For copyright permissions, see Appendix B (pg. 240).

MacLatchy, J. (2020) Fieldnotes in marginal landscapes: Toward an Anthropocene ethic of care for small things. In C. Burkholder & J. Thompson (Eds.), *Fieldnotes in qualitative education and social science research: Approaches, practices, and ethical considerations* (pp. 46-60). Routledge. http://doi.org/10.4324/9780429275821-5

present, or not, in our relationships with other humans, with other creatures, and other things (brown, 2017; Davis, 2017; Demos, 2017b; Demos, 2017c; Haraway, 2016; Head, 2016; Rose, 2017; Tsing, 2015). The eccentric artist is not actually caring too much for a few worthless pieces of garbage; rather, the artist is re-inscribing these objects with worth and value, transforming them into something else, and elevating them to a different status that has the potential to make shifts in relationships with this material and in how we understand the interconnectedness to each other and the more-than-human world (Demos, 2016; Giraud & Soulard, 2017; Ricou, 2014; Strasser, 1999; Thill, 2015). By extending care toward small plastics (Lee, 2016; Robson, 2012), we also extend care outwards through the interdependent web of life (Conley, 2016; Haraway, 2016; Puig de la Bellacasa, 2017; Rose, 2013), toward those who live "with the effects of plastic pollution" (MacLatchy, 2020, 50).

If garbage, trash, waste, and plastic flotsam can be of such interest, sources of knowledge, usefulness, and beauty, then how is it that these things become "waste?" Although the terms "trash" and "waste" have come to be used interchangeably, Humes explains their differences. Waste, when used as a verb, implies that "the object being wasted has value" (Humes, 2012, 179). "If trash is defined not as waste but as the physical manifestation of wastefulness, the discussion stops being about disposing of the dirty or useless, and starts being about asking why we are throwing away so much hard-earned money" (Humes, 2012, 179-180). Using the example of items found by artists-in-residence at The Dump in San Francisco, Humes (2012) explains that some of these items clearly had once been "beloved keepsake[s], until one day, [they were] not, and the trash heap claimed [them]" (204). The items were changed from treasure to trash not because of anything wrong with them, but because of "luck or death or poverty or time or

boredom or age" (Humes, 2012, 188). This raises the question of why we are so wasteful not just with materials, but also with so much creativity, care, labour, land, and lives. If we are oblivious to the amount of labour, life, love, or sacrifice that has gone into creating an object, then there might not be much reason to care for or to desire it (Thill, 2015, 29).

Thill (2015) explains that it "is our specific affective relationship to an object that makes it 'waste' in the first place. Once desire has been squeezed out of it, we are left with the waste products of those desires" (29). The solution to the problem of excess waste, then, in part, seems to be to reinscribe the object with desire (Strasser, 1999; Thill, 2015). Given the vast volume of waste things that continue to accumulate, this is overwhelming and can feel impossible. But, since there was capacity for all of these items to be created in the first place, there should also be capacity to deal with their continued existence. It is a challenge to continue to desire and hang onto and repurpose and find places for all of the objects that drift through our lives in a capitalist consumerist culture that relies on disposability (Davis, 2015b; Liboiron, 2013). But those who work toward zero waste and are committed to repurposing and reusing materials show that, although it takes a lot of effort and forethought and in many cases also class privilege, it is possible to be responsible to materials (Hawkins, 2021). The zero-waste person not only enjoys the benefit of not being crushed to death by an accumulation of stuff that they don't actually want but also don't want to waste, but also enjoys not being burdened with the desire for or attachment to all of these things in the first place (Humes, 2012). Rather than trying to value endlessly accumulating bits and bobs of plastic, we might just skip making these items in the first place and instead focus our value and desire on the lives, labour, and ecosystems that would otherwise be used to make these objects (Humes, 2012; Thill, 2015).

My accumulation of collections of marine debris objects was in part an experiment in understanding how waste accumulates, but it was more so an experiment in finding out what it would mean to actually value all of these objects and reinscribe them with desire in order to refuse them being waste (Humes, 2012; Robson, 2012; Thill, 2015). By treating the plastic objects that I collected as though they were precious artifacts, I was performatively shifting the affective relationship and therefore transforming the objects from waste back into something desirable, with value and worth (Berlant & Greenwald, 2012; Chen, 2012; Haraway, 2008). If our affective relationship and thus our behaviour towards things (object things, but also people, creatures, ecosystems, living things) defines them as worthless, trash, or expendable, then so can behaviour define things as worthy and shift relationships (Haraway, 2008; Haraway, 2016; Tsing, 2015). Continuously reinscribing objects with desire by repurposing and reinventing them refuses these objects becoming trash (Strasser, 1999; Thill, 2015). It also refuses the manufactured "need" for a deluge of even more objects, resulting in fewer waste objects to contend with in the first place (Davis, 2015b; Humes, 2012; Liboiron, 2013). The planet is being trashed through resource extraction that turns living ecosystems from something with immense and unmeasurable value into something with only use value (Kettleborough, 2019) that, once expended, becomes worthless, or waste (Davis, 2017; Gan et al., 2017). Enacting care toward things not deemed to have any capitalist economic value can shift desire and sense of worth instead to the intact, alive, and thriving ecosystems (Humes, 2012; Thill, 2015).

3.2.4: *Attachment, Nostalgia, Obsolescence*

Another reaction to the show came from a person who wrote in the guestbook about a warm feeling of familiarity and attachment toward some of the objects—specifically the balls of tangled fishing line. A few months prior to the show, I suspended one ball of fishing line from the ceiling in a classroom to see what it might look like with some of the levity and buoyancy that it might have had in the water (Figure 3.7). I invited others to climb and swing on it, which they did. When it was sitting on the floor, people interacted with it kind of like it was a (slightly-less-comfy and little-bit-smelly) beanbag chair. In contrast with these feelings of attachment, these items all most likely ended up adrift in the ocean because of someone's lack of attachment to them (Humes, 2012; Thill, 2015)—both physically and emotionally. It seems likely that, were there fewer objects swirling around us and passing through our lives, we might have more capacity to care for each one (Humes, 2012; Thill, 2015). Nevertheless, despite some of these feelings of attachment, much of the fishing line was thrown "away" after the show, for the practical reasons that it took up a lot of space, was an unruly tripping hazard, and I needed a place to park my car in the garage. These items, along with the majority of marine debris that I collected over the years, became waste again after just a brief stint in the spotlight. There were too many things for them all to be artifacts—they overran me, just as they overrun the oceans (Thill, 2015).

Figure 3.7: Suspended line. Nov. 15, 2018.

Another person expressed feelings of nostalgia toward a partly calcified plastic frame of a television screen, which, although probably not really very old, might now be considered ancient considering the pace at which technology changes (Figure 3.8). Like fads in plastic toys, this (along with many other technological waste objects that were not included in the show) points to the persistence of technological objects long after their fad has passed (Davis, 2015b; Liboiron, 2013; Thill, 2015). While people now watch big flatscreen televisions, the old clunky cathode ray tube televisions that took up too much space in living rooms still exist, taking up too much space somewhere else, sometimes in the ocean.

Figure 3.8: Ocean Treasures #248, including TV frame. May 21, 2019.

Another reaction from some who viewed the show was nostalgia that arose from recognizing a type of doll, toy car, plastic hair barrette, pieces of Lego, the plastic head of "Clifford the Big Red Dog," plastic "2" magnet from a magnetic alphabet and numbers set, or a plastic monkey from the "barrel of monkeys" game from their childhood (Figure 3.9). The cheerful nostalgia of remembering a childhood of arranging plastic letters and numbers on the fridge and reading Clifford storybooks and quickly becoming bored of trying to pick up precariously dangling plastic monkeys might then be followed by a realization of just how long these objects have been floating around the ocean, and for how much longer they, and every other piece of plastic, will persist. Every passing fad that makes its way into plastic form is not so passing after all.

Figure 3.9: Marine debris toys. July 17, 2019.

3.2.5: *Deep Time*

At my artist talk, someone spoke of how the show made them think about the reach of all of these objects through deep time. They connected the objects to the living processes that happened millions of years ago that are necessary to make oil, and the unknown depths of future time into which these objects will persist (Robertson, 2016; Weisman, 2007). Plants and animals lived and died, decomposed in an absence of oxygen, were buried deep in sedimentary layers, compressed, and turned into petroleum (Davis, 2015a; Liboiron, 2015; Weisman, 2007). The petroleum was discovered by humans, mined, processed, transported, and made into these plastic items, which were then enjoyed or used by someone for possibly just a few fleeting moments before being set aside, forgotten, or thrown "away" (Leonard, 2010). On their journey to "away" (the ocean, a landfill, the future) (Gray-Cosgrove et al., 2015; Robertson, 2016), these plastic objects are worn and abraded, bleached and weakened by ultraviolet light, and

disintegrate into smaller pieces on their way to becoming microplastics (Law, 2017a; Liboiron, 2015; Thill, 2015). They are bitten by animals, ingested by animals, tangled around animals, and as such, very often kill animals (Alaimo, 2016; Thill, 2015). They become sediments, are buried, compressed, and, despite many transformations, they persist (Robertson, 2016).

We don't know how far and in what ways these objects will reach into the future (Jazvac & Corcoran, 2017). Plastic, as Heather Davis (2016) explains, is a "material of compressed time" (305). That is, the deep time implications of plastics are embedded in the material, even when use of them is fleeting (Davis, 2015a; Liboiron, 2015; Weisman, 2007). Despite that so much plastic is only used for a moment before being discarded, plastic connects the present with both the deep past and the deep future (Leonard, 2010). American artist and environmentalist Pam Longobardi has explained that the persistence and ubiquitousness of plastics forces us to consider what we want our last moments of the human species on earth to be (2015, 5:13). Because plastic doesn't decompose, it persists, bearing evidence into unknown depths of the future of the particular capitalist materialist attempt to separate humans from the rest of the porous living world and its inevitable processes of death and decay (Shotwell, 2016; Thill, 2015). Thus, plastic objects are artifacts that show evidence of the particular time period of the capitalist colonial system founded on the delusion of separation between humans and the rest of the living world (Davis, 2017; Haraway, 2016; Rose, 2017; Shotwell, 2016). When they are rare, artifacts are usually treated as though they are precious, and are often carefully studied for what they can tell us about a certain time period. So, what is actually strange is not my attention to and care for plastic artifacts, but that there are so many of them. What is

strange is that the system of capitalist consumption is currently so careless with this unfathomable abundance of artifacts that will tell the future about our lives.

There were many other reactions to the show. One response came from a child, who asked if they could have my "bunchems" when I was done with them. When I asked what those were, I was pointed to my mysterious clump of multicoloured plastic things, that, for lack of any other explanation, I had described as plastic burrs. They were small rubbery things each covered with a profusion of little flexible spikes with hooked ends, such that they all stuck together like Velcro, or a clump of burrs. I asked the child what they were for, and was told that they were for "bunchin' them together to make things." I had been perplexed as to why anyone would think there was a need to make plastic burrs, when burrs already exist, and already cause problems when interacting with children's hair. But, these plastic burrs exist, they are designed for sticking to and entangling things, and they are doing just that, including in the ocean.

Another person enjoyed playing a game of "I spy" with their child, looking in the hundreds of images on the wall for a bag, a boot, a balloon, or something that is blue. The child, maybe six or seven years old, appeared to enjoy the fun game, but also recognized that this isn't all entirely a fun and joyful thing, and said that they hoped I wouldn't find any more garbage in the ocean. Another person enjoyed looking at the photos and identifying items that they remembered finding with me or helping to carry, and commented on how having been occasionally part of and witness to the process that led up to the presentation helped them to gain a better perspective. The light-hearted fun of such activities makes an uncanny and unsettling contrast with the knowledge of the horrific destruction that all of these objects are causing (Alaimo, 2016). Someone else commented about being surprised at the beauty of all of these items, despite feeling that

they were also disturbing. This makes sense—often plastic is made to be colourful, shiny, light-catching, glittery, or otherwise flashy and eye-catching, so, despite the objects' forays into the weathering effects of the ocean, some of these eye-catching or beautiful qualities remained (Alaimo, 2016). There is an incongruence between the cheerful, beautiful colours and the mundane everyday benign harmlessness of the use of the objects and the destruction that these items go on to cause (Alaimo, 2016). The tension that this provokes presents a site for discerning some of what the artifacts make clear about western habits of consumption.

Thill (2015) addresses the incomprehensible scale of waste, explaining that "waste challenges our ability to adjust our contemplation of it to the proper scale," and therefore "the temptation is to want to encompass everything: to name and honor and linger over every bit of crud" (5). I did just this, lingering over (not every, but very many, as many as I could) bits of crud, by documenting, cleaning, and sorting. But, Thill explains, "you would be hard pressed to find […] an object more resistant to capture [than waste]" (2015, 5). This is true—I may have captured a lot of objects, but I did not capture so many more, because I couldn't see them, or they were too many, too heavy, too big, tangled in something, or otherwise too unruly for me to manage. Neither did I capture an understanding of scale, or of the scale of the impact of cumulative small actions. And many of the items that I did capture were just parts of things, missing their other pieces or micro-pieces that have flaked and crumbled from formerly smooth surfaces to become microplastics (Figure 3.10). When I, with some friends, found a big plastic navigational buoy washed up and cracked open on the rocks, we could not capture it all. The Styrofoam innards were spilling out such that individual beads blew in the wind, forming snow-like drifts amongst the rocks and trees, and gathering like fish and frog eggs in tidal

pools (Figure 3.11). We collected many of the bigger chunks and strung them together with found fishing line to carry them away, but as we handled them and moved with them, beads of Styrofoam continued to fall off and blow away.

Figure 3.10: Bottle cap disintegrating into microplastics. April 9, 2018.

Figure 3.11: Styrofoam beads in a tide pool. February 11, 2018.

3.3: Material Agency: Microplastics

This resistance to capture and control, as Alaimo (2016) argues, is an indication of the agency of these objects (133). "Plastic […] mock[s] both the human mastery of the material world and the green ideal of wildness" (Alaimo, 2016, 136). It is clear that, although the plastic objects may be of human creation, they are certainly not under human control (Bubandt, 2017). Plastic resists human control and demonstrates agency when it refuses to stay in the place called "away" to which we send it (Alaimo, 2016; Bubandt, 2017; Thill, 2015). It shows us that "away" is a multitude of places, all of which are interconnected, none of which are separate from those of us who have sent our discards there (Davis, 2015b; Liboiron, 2018a; Shotwell, 2016); thus, "away" turns out, in many cases, to actually be "here." This does not deny the uneven amount of harm that capitalism, extraction, consumption, and externalization have on more marginalized humans and more-than-human beings in the form of waste colonialism and environmental

racism (Liboiron, 2017; Liboiron, 2018b; Liboiron, 2021; Waldron, 2018; Weeks, 2017). Instead, it emphasizes the impossibility of entirely escaping the agency of discarded objects, even if we do manage, for a time, to maintain the illusion that they are gone through distancing (Gray-Cosgrove et al., 2015; Humes, 2012; Thill, 2015).

Rather than gaining an understanding of scale, what I learned from collecting and attending to these plastic objects was more about the interrelationships between humans, more-than-human beings, plastics, and forces of ocean currents, wind, waves, and sun (Ebbesmeyer & Scigliano, 2014; Weisman, 2007). Many items bore bite marks from animals who had mistaken these objects for food, and these objects that I found were only the pieces that the creatures did not manage to ingest (Figure 3.12). Some objects had algae, seaweeds, shellfish, tunicates, or other sea life growing on them. These objects were hosting tiny ecosystems, and I did not remove them from the ocean because that would have been to kill these creatures. These, and my inability to capture all of the bits and microplastics that crumbled or released plastic dust onto my hands and into the air and water, indicated how plastic is inextricably now a part of water, air, soil, and living beings (Davis, 2015a; Davis, 2015b; Liboiron, 2015; Thill, 2015). This shows that we are inevitably also in relationship with plastics through our myriad entanglements with these other elements.

Figure 3.12: Plastic bottle with a bite taken out of it. May 11, 2018.

While it is easy to demonstrate animal-plastic entanglements by showing items bearing bite marks or pictures of entangled animals, in these cases, we can still imagine the animal and the plastic as separate: the animal ate the plastic, the plastic is inside the animal, or entangled the animal, maybe killed the animal, but it is not the animal, as we can still identify which is plastic and which is animal. But it becomes even more difficult to maintain a belief in the separation between creature and plastic when we consider microplastics (Law, 2017a; Thill, 2015). Since, for the most part, we cannot see microplastics, Thill (2015) argues that "now even the water itself is equally inscrutable to us. We cannot even say what the thing we call water actually is anymore. You cannot tell by looking where the water ends and where the waste we've dumped inside it begins" (114). Plastic, which has often been imagined as capable of forming impermeable barriers to keep humans and human food separate from the germs, dirt, and contamination of the rest of the world (Shotwell, 2016), actually ends up doing the opposite: by becoming part

of water, soil, and bodies, it demonstrates how complexly and inextricably entangled and inseparable we are with the more-than-human world of multi-species and other biogeophysical entanglements (Davis, 2015a; Shotwell, 2016; Thill, 2015).

Such objects and their resistance to capture show how deeply embedded plastics are in the entangled web of relationships of the more-than-human world (Alaimo, 2016; Chen, 2012; Thill, 2015). "Linger[ing] in those moments during which [we] find [our]selves fascinated by objects, taking them as clues to the material vitality that [we] share with them," Bennett (2010) argues, is a way to cultivate an understanding of the agency and animacy of objects (17). This becomes the ethical task of learning to recognize as kin both the creatures with whom we are connected and the objects that make visible that connection, and thus learning how to act more carefully towards these kin (Bennett, 2010; Haraway, 2015; Haraway, 2016; Kimmerer, 2013; van Dooren, 2014).

3.4: Gravity and Levity, Grief and Hope

One evening I went into the gallery after hours to take pictures, and in the dark and quiet, I noticed how heavy it all felt. I felt the weight of all of the things around me, as well as the weight of all of the things pictured on the walls that were not actually present in the space. Maybe part of it was tiredness from installing the show. Maybe part of the heaviness was from thinking about all of the trips made carrying heavy debris from remote areas, or paddling a kayak laden with a precarious load. Maybe part of it was tiredness from carrying thirteen heavy and awkward wooden plinths up from the gallery basement. Likely part of it was from knowing how unimaginably small and inconsequential this great effort was on the grand scale of how much plastic is out there.

Certainly another part of it was from knowing that I would soon have to take it all down and take it home again and put it somewhere. This heaviness was also likely because it was hard to know if all of this effort was really worthwhile and whether it could offer any hope.

Regarding hope, Rosi Braidotti explains that becoming ethically sustainable involves "practic[ing] a humble kind of hope, rooted in the ordinary micro-practices of everyday life" (Braidotti, 2006, 278). I share Stacy Alaimo's (2016) perspective when she explains that she is "less hopeful than Braidotti, and more critical of the term 'sustainability,'" but nevertheless advocates for an ecological ethic being located "in both ordinary and extraordinary practices, both private, quotidian improvisations and more spectacular, even outrageous public performances" (2). My acts of collecting bits of marine debris were most often small, ordinary, and mundane moments, and although some people took notice of the continuous efforts, there was no opportunity to see a monumental pile of it all together. All the acts of saving and sorting and cleaning over the course of a few years are also rather mundane and unexciting. The approximately six hundred images and accompanying lists of marine debris inventory that I relentlessly posted online amount to an assembly of ordinary acts into something a bit more spectacular and outrageous in their accumulation. Putting all of the collected items into a gallery where they could be viewed all together also functions to bring this multitude of ordinary and mundane objects together into something bigger, arguably extraordinary, and public.

Putting all of the images together in a grid that spanned three walls was in part an attempt to understand the scale of all of these things together (Figure 3.13). Although it was a lot to be confronted with, the small 4" x 6" pictures didn't do much to communicate

scale, and yet the amount of available wall space in the room would not have allowed for displaying six hundred photos much bigger. Likewise, displaying such a large volume of things that was just a fraction of all I'd collected was a way of trying to imagine what exactly that fraction was. The impossibility of this served to highlight the incomprehensibility of the scale of the problem. Faced with the incomprehensible, it seemed that hope might be more readily found at the small scale, in the specific, even when entangled with grief (Head, 2016).

Figure 3.13: Ocean Treasure images on the gallery wall. July 15, 2019.

While thinking about the heaviness I felt surrounding this show, I focused my attention on the collection of Mylar balloons. I had stuck some of them to the wall as if they were floating up and into the sky. At the top I had put the balloons that were in better condition with fewer rips and most of their colour remaining. Further down the wall were balloons showing a bit more wear, and piled against the wall on the floor beneath them were balloons with no colour left, ripped or with pieces missing, and those on the verge of

flaking apart into microplastics (Figure 3.14). (I hadn't kept any of the ones that were already disintegrating into microplastics.) The balloons travelling up the wall carried aspirations of lightness and weightlessness, but were inevitably pulled back down by gravity as they gradually transformed from cheerful, colourful, and shiny, to sad deflated dirty garbage (and then, not on display, to microplastics, blowing in the wind, mixing with sediments, flowing in ocean currents, and ingested, becoming part of creatures' bodies). Even what seems weightless is still inevitably bound by gravity.

Figure 3.14: Balloons on gallery wall. July 17, 2019.

In the centre of all of the balloons on the wall was a heart-shaped balloon featuring a shiny-but-partly-worn-off ocean scene depicting cartoonish dolphins and fish and other happy smiling creatures. When I first found the balloon, it was still a little bit

inflated, floating on the surface of the water (Figure 3.15). When I touched it, some of the shiny colour came off on my hands, causing the image to disappear a little bit more. I marvelled at the irony of this object that conveyed a celebratory sentiment of love for the ocean and its abundance and diverse life, complete with levity and cheerfulness, but was in a form that causes harm to the very thing it was trying to celebrate. This seemed to me to speak of a disconnect from the real conditions and struggles and interconnectivity that comprise the actual land, air, and ocean, and therefore also about the impacts of balloon-related actions (Shotwell, 2016). This disconnect is both a cause and a result of the dysfunctional and ignored relationships of interdependency between humans and the rest of the living world that have been severed by colonial delusions of human exceptionalism (Bjornerud, 2018; Davis, 2017; Haraway, 2016; Rose, 2017; Shotwell, 2016; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020). This is likely a part of the reason for the epidemic of sadness and homesickness for our more-than-human kin (Albrecht, 2019). If we were at home with and in good relationship with our more-than-human kin in the ocean, I imagine there would be less desire for cheerful ocean-themed balloons as a substitute for the joy that could be derived from right relationship and connection.

Figure 3.15: Ocean-themed balloon found in the ocean. June 1, 2019.

How, then, can we promote wonder at, awareness of, and connection with our more-than-human kin and the complex world around us, rebuild relationships, relearn how to be at home in multi-species entanglements? Plastic marine debris items as artifacts offer some evidence of how individual actions and the collective actions of a consumer society are inextricably entangled with more-than-human creatures, both on land and in the ocean (Liboiron, 2015; Shotwell, 2016). Humanity cannot be separate from the rest of the living world, no matter any efforts at mastery and control, and despite efforts to seal ourselves off from dirt and contamination through impenetrable plastic barriers or by making plastic objects resistant to decay (Davis, 2015a; Shotwell, 2016; Thill, 2015). The task is to redirect the creativity and ingenuity that has gone into trying to solidify this false or misguided separation—such as through the production of these discarded plastic items—instead toward attentiveness, care, and rebuilding relationship (Conley, 2016; Humes, 2012; Lee, 2016; Puig de la Bellacasa, 2017; Rose, 2017; Thill, 2015). The weight of this task is great, and while balloons offer an easy, uplifting, buoyant image of

hopefulness, we all know what must happen beyond the moment when they disappear into a speck in the sky. Gravity insists—balloons fall back to earth, and humanity is bound inextricably with the rest of the living world.

Chapter 4: Weeds and Invasion: Knotweed

4.1: Introduction: Settler Collaboration with Invasive Knotweed

In the fall of 2019, I was an artist in residence at Eastern Edge Gallery in St. John's, Ktaqmkuk (Newfoundland), as a part of a land-based residency that was mentored by multidisciplinary land-based settler artist Marlene Creates. To do this residency, I travelled to another place, where not only was I a settler, but I was a visitor with no history or prior relationship to the land, other than having been there briefly a couple of times in the past. I wondered how I could spend only two months developing a land-based practice on visited land with which I didn't have time to develop any kind of durational relationship. In many ways, there are some similarities between the land in Ktaqmkuk and the land with which I was already more familiar, in Mi'kma'ki—rocky coastlines battered by wind and ocean, bare rock, thin soil with low-lying shrubs, bushes, and small conifers, plastic detritus washed up on shorelines and floating in the water. The city is hilly with old and slanted houses and buildings, and wild and weedy spaces in between, in the alleyways and pathways of stairs between streets. Behind the house where I was staying there was a jungle of knotweed through which a path wound its way up the hill. Even though every place is unique and specific, since I was unable to spend a long time getting to know a new place through changes and seasons, I planned to continue my work with invasive species of plants and invasive waste in the form of plastics with which I had already begun to become somewhat familiar.

Before the residency, I could not know exactly what I would end up doing or making until I had spent some time on the land, figuring out how I might interact and respond to what I found. Rather than a clearly delineated plan, my intention for the

residency was guided by the question of how to enact decolonial settler relationship with land in sites of disturbance (Hurley & Jackson, 2020). As a settler and beneficiary of systems of capitalism and colonialism that are causing climate crisis and mass extinction (Bendell, 2018; Moore, 2017), my practice focused on exploring ways to act toward land with care in order to develop a decolonial settler practice of resisting these systems (Palmater, 2016). My intention was to do this by working primarily with invasive species, because, as a settler living and working on Indigenous land, and as a participant in and beneficiary of the systems of colonialism and capitalism that colonize, exploit, and wreak havoc on land, I am in some ways an invasive species myself. My plan was to work toward developing a settler decolonial practice of harvesting plants by working primarily with invasive knotweed, and considering how a settler practice of harvesting native plants might differ. I focused on working in areas of destructive human disturbance, such as marginal landscapes: the in-between places, the forgotten places, and the wastelands, places far from dominant social awareness where nevertheless, more-than-human forces interact, constantly negotiating and overlapping and shifting boundaries (Head, 2016; Lee, 2016; Ricou, 2014).

A key aspect of responding to invasive species is paying attention to and understanding the roles and connections and relationships that form ecological community (Reo et al., 2017). It is often not possible to eradicate invasive species, and, as with ocean plastics discussed in the previous chapter, some attempts to do so might actually cause more harm than good (Liboiron, 2015). Knotweed, strongly despised by many people for its tenacity and ability to cause damage to structures and roads, is treated with a variety of eradication measures, such as repeated cutting, burning, and poisoning with herbicides such as glyphosate (Jollimore, 2021; Parkinson & Mangold, 2010). The

latter method, however, while it may be somewhat effective at killing knotweed, also results in the release of chemical herbicides into the environment that affect more species than just the knotweed (Mesnage et al., 2015). A different approach to invasive species such as knotweed would be to consider how to work with it in ways that support the thriving of biodiversity (Berrigan, 2014; Head, 2016). Knotweed, like many other invasive species, is now an inextricable part of the ecosystems that it has invaded (Liboiron, 2015). Rather than trying to eradicate it, knotweed must be accepted as part of the landscape (Cottet et al., 2020), and "should no longer be perceived as a problem that could be obliterated once and for all but as an object among others to manage day after day" (Cottet et al., 2020, 9). Rather than exclusively trying to eradicate knotweed with increasingly aggressive measures, I aimed to take the approach of learning about and from knotweed and its entangled relationships in community with other species (Haraway, 2014). I hoped that this might reveal that landscapes full of knotweed are not entirely wastelands, but rather, are complex changing landscapes with redeemable qualities and gifts to be discovered (Lee, 2016). I wondered if knotweed, when approached with curiosity (Gan et al., 2017), might be a collaborator for building livable futures, and how it might present opportunity for learning about adaptation and flexibility in changing Anthropocene landscapes (Haraway, 2016; Head, 2016).

It seems, then, that the task in disturbed landscapes is to do the work of caring in a way that undermines colonial invasion of and control over land (Duclos & Criado, 2019; Lee, 2016; Puig de la Bellacasa, 2017; Ricou, 2014; Rose, 2017; van Dooren, 2014). About wastelands, Erica Violet Lee (2016) explains that "there is nothing and no one beyond healing. So we return again to the discards, gathering scraps for our bundles, and we tend to the devastation with destabilizing gentleness, carefulness, softness" (n.p.).

Working with the discards, with waste, and with troublesome invasive plants is not only about working with what we have and paying attention to where there are gifts amidst destruction (Tsing, 2015). As Lee (2016) asserts, it is also about asserting that nothing and no one is beyond healing. For my residency, I proposed enacting gestures of this sort of care in order to move toward decolonizing and healing in some such area of destructive disturbance and waste (Duclos & Criado, 2019; Lee, 2016; Puig de la Bellacasa, 2017; Rose, 2017; van Dooren, 2014).

Lee (2016) explains that wastelands are named as such by those who have extracted all that they deem to be valuable and caused destruction to the rest. The creation of wastelands, Lee (2016) explains, is a method of colonization. Wastelands, including the people who live in them, "are considered not simply unworthy of defence, but deserving of devastation" (Lee, 2016, n.p.). But despite rampant destruction, wastelands can and do harbour life and growth. As Laurie Ricou (2014) explains, "disturbance […] allows or necessitates a new succession of species […] disturbance enables renewal" (164). However, often this new succession of species consists of invasive plants that take advantage of the space opened up by the destruction of native ecosystems. "The human animal is the ultimate and most aggressive of disturbers, and often its disturbances allow for invasion" (Ricou, 2014, 164). This invasion can include roads, buildings, big box stores, parking lots, and industry, as well as the invasion of introduced, non-native plants and animals that out-compete native plants and animals, and land destroyed or polluted by resource extraction and toxic waste.

Considering settler humans as an invasive species further highlights the misguidedness of settler entitlement to exploitatively extracting resources from land. This especially applies to native species, but invasive and non-native species are still entangled

in ecosystem relationships, and thus, invasive species too are land (Liboiron, 2018a). Therefore, while I focused on working with invasive knotweed for this project, in order to avoid perpetuating settler colonial entitlement to land (Epp, 2012; Moreton-Robinson, 2003), I still needed to consider how the plants that I was harvesting were entangled in the community of ecosystem and the potential impacts of my taking. As Ricou argues, human disturbance doesn't have to be destructive; rather, "the other side of destructive disturbance [is] human caring" (2014, 164). This project worked to discover how settler human disturbance could embody caring, in resistance to destruction (Duclos & Criado, 2019; Lee, 2016; Puig de la Bellacasa, 2017; Rose, 2017; van Dooren, 2014).

Many invasive plant species, just like plastic garbage and other refuse, are plentiful, persistent, and therefore are what we must work with to stop destruction of land through the exploitation of resources and work toward building livable futures (Head, 2016; Tsing, 2015). By working with and learning from invasive knotweed I aimed to work towards transforming some of its negative, colonizing effects into gestures toward decolonization and healing. The effectiveness of these attempts might be considered limited to non-existent, partly because I didn't figure out a way that I can use knotweed to replace dependence on other over-exploited resources, and partly because these gestures were so small as to be insignificant in the grand scale of mass extinctions and climate crisis. But these actions still matter, because, by asserting that such small things are worthy of attention and care (Duclos & Criado, 2019; Lee, 2016; Puig de la Bellacasa, 2017; Rose, 2017; van Dooren, 2014), they also assert a place for hope (Lee, 2016; Kirksey et al., 2013; McKibben, 2005; Tsing, 2015).

4.2: Lessons from Immigrant Plants

For the residency at Eastern Edge, I proposed experimenting to find a way to use knotweed fibres to make cord and then use the hopefully resulting cord to perform a site-specific act of mending toward some instance of destruction. I had learned to make cord from day lily leaves on the West coast, in a workshop with the Earthand Gleaners Society in Vancouver, BC, at their Means of Production Garden, where they grow various plants that can be used for weaving, dying, carving, or other creative endeavours (Earthand Gleaners Society, n.d.). They do this as a way to move art-making away from the manufactured capitalist need to buy art supplies, when art supplies are readily available in the world around us, demanding creative attention, and are often gifted by the land (Earthand Gleaners Society, n.d.; Kimmerer, 2013). I had later applied this twisting technique for making cord to marine debris, using strands of polypropylene pulled from washed-up fishing rope on the East coast (Figure 4.1).

Figure 4.1: Day lily cord and polypropylene cord. December 13, 2018.

Day lily, while plentiful in city gardens and not native to Turtle Island, does not seem to be a problematic invasive plant. Knotweed, however, is invasive, plentiful, and very tenacious and resistant to almost all efforts to get rid of it. Kimmerer (2013) explains what it means for both immigrant plants and immigrant humans to become "naturalized." She explains that some "immigrant plant teachers offer a lot of different models for how *not* to make themselves welcome on a new continent" (2013, 214). She provides examples of invasive plants that "poison the soil so that native species will die … use up all the water … [and] have the colonizing habit of taking over others' homes and growing without regard to limits" (2013, 214). Kimmerer discusses the example of plantain, also called White Man's Footstep, named as such because "it arrived with the first settlers and followed them everywhere they went" (2013, 213). Plantain, unlike most other immigrant plants, she explains, is useful medicine for healing bites, burns, and wounds, and does not out-compete native plants. "Its strategy is to be useful, to fit into small places, to coexist with others around the dooryard, to heal wounds" (Kimmerer, 2013, 214). In doing this, plantain has become integrated with the native plant community. "This wise and generous plant […] became an honoured member of the plant community. It's a foreigner, an immigrant, but after five hundred years of living as a good neighbour, people forget about that kind of thing" (Kimmerer, 2013, 214). Kimmerer suggests that "the task assigned to Second Man is to unlearn the model of kudzu [a plant that is invasive to Turtle Island] and follow the teachings of White Man's Footstep, to strive to become naturalized to place" (2013, 214).

4.3: Knotweed Experiments

Knotweed, the plant with which I had planned to work, is definitely invasive, taking over disturbed areas and expanding to the exclusion of all other plants, and is not at all naturalized like plantain. But nevertheless, it is very much present on Turtle Island, in Mi'kma'ki and Ktaqmkuk, and not going away, so I wondered if I could discover that it might have something useful or helpful to offer. I knew that it was edible, and might thus offer gifts in the form of food, but, having tried it, I also knew that it tasted like a bland, uninspiring version of rhubarb (also not native to Turtle Island, but not invasive), which is already sufficiently plentiful and is ripe at the same time as knotweed. And one can only eat so much rhubarb or knotweed, so eating knotweed didn't seem like the answer to finding usefulness in its insistent abundance.

4.3.1: *Cord*

First, I had harvested some young knotweed stalks in the spring in Eskikewa'kik (also called the Eastern Shore of Nova Scotia), and found that I could peel the skin from the stalk. I had let these pieces of skin dry, and then later dampened them to make them workable. I split them into strips about the same width as day lily leaves, and then twisted them into cord. It seemed to have worked, but once dry the cord became stiff and brittle and would crack and break when bent, which is not a desirable or useful quality for cord.

Then, in Ktaqmkuk, in the backyard and up the hill behind the house where I was staying, there was a jungle of knotweed. Stairs and paved pathways passed through what seemed like a tunnel underneath the towering stalks. The ground underneath the stalks was littered with wrappers and bottles and plastic bags, and appeared to be too shaded for anything else to grow. I harvested a few stalks of this knotweed, but when I tried to peel

the skin from these September stalks the way I had with the spring stalks, I could only get short and thin pieces, which were too small to work with. I tried to twist them into cord anyway, but it was difficult to create any length, and the result was flimsy and easily pulled apart. Next, I tried cutting and breaking the stalks lengthwise into approximate foot long pieces, and then scraping the inside of the stalk away from the skin with a butter knife. This resulted in thick, stiff, stick-like pieces that were not sufficiently pliable for twisting into cord. I tried breaking these pieces apart into thinner pieces hoping for more pliability. I managed, with difficulty, to forcibly twist some of this into cord, but the result was short, looked badly frayed with all the stiff ends poking out, and would easily pull apart because the pieces were too short and stiff to hold onto each other.

Next, I tried boiling pieces of the stalk to soften them before repeating this process, but this seemed to make no difference. I tried again, this time boiling the stalks for hours longer, again with the same results. I tried pounding the pieces against the concrete floor with a rock, which might have helped a little, but not enough. Then I tried using the leaves instead. I cut them into thin strips, let them dry, and then dampened them a bit to make them pliable and twisted them into cord. At first this seemed to work a bit better, although the pieces of leaves were too short to hold onto each other very well. But when dried it was stiff and brittle, just like the cord made from the spring stems. Having run out of ideas for knotweed, I tried all of these same processes with a bit of knapweed that I harvested from a city pathway by a creek, and achieved similarly disappointing results (Figure 4.2). In need of a break from working with knotweed, I decided to temporarily return to plastics, and so, I tried twisting cord from strips of plastic bags.

Figure 4.2: Cord experiments. September-October, 2019.

One day I followed the Sugarloaf section of the East Coast Trail from where it rises above Quidi Vidi Harbour as it follows the coastline above the steep cliffs that rise from the ocean. A little while into my hike, I noticed a plastic bag caught in a tree. A few minutes later, I noticed a couple more, and retrieved one that I could easily reach. As I carried on, the concentration of plastic bags tangled in trees and on the ground continued to increase. I collected a few more bags, but quickly discovered from the increasing volume of plastic that I would not be able to collect it all. At one point, I crossed a stream that was full of film plastics—instead of plants and grasses waving in the current, there were strips of plastic; instead of leaves and branches collecting and tangling together around rocks, there was plastic, and instead of any other identifiable sediment, there were layers of plastic. I continued on, until I reached a point where all of the trees were full of plastic bags and other film plastics that whipped around in the westerly wind that blew toward the ocean (Fig 4.3). Many trees were dead or had dead branches that were entirely

wrapped in plastic, and I wondered if they had died from being suffocated. The ground was layered with plastic, mixed in with some dead spruce needles and a bit of soil (Fig. 4.4). This landscape was so thoroughly wrapped in and embedded with plastic that it appeared that any attempt at cleanup would be impossible.

Figure 4.3: Trees full of plastic. September 8, 2019.

Figure 4.4: Plastic on forest floor. September 8, 2019.

Both incredulous at the abundance of colours and varieties of plastic art supplies available for harvest and horrified at a scene far beyond anything I'd ever seen before, I realized that the reason for this profusion of plastics was that this part of the trail was right below the Robin Hood Bay Landfill. The landfill predated the trail, and when this particular section of the East Coast Trail was built, it had to pass through the narrow space between the landfill and the edges of the cliffs overlooking the ocean. The plastic that covers the forest at this part of the trail, about an hour's walk or more from any road in either direction, is undoubtedly only some of what has blown away from the landfill. Given how much plastic was in the trees and on the ground, I wondered how much more regularly flew right past without getting caught in the branches on its way to the ocean. In fact, despite having been snagged in the trees and prevented from landing directly in the ocean, all of these plastic bags, wrappers, and other film plastics were on their way to the ocean anyway, in the form of microplastics. They were all in various stages of

photodegradation and being shredded by the wind whipping and tugging them against sharp twigs. I collected some pieces of this pre-marine plastic, choosing a variety of colours, including some shiny metallic green wrapping "paper." Back at the studio, I washed these, hung them to dry, and then cut some strips and twisted them into cord (Figure 4.5). This worked much better than the knotweed. It was also more pliable and easier to work with than strands of polypropylene fishing rope, the other plastic material I have used to make cord. But, while cord made from film plastics could certainly be useful for something, I wanted to make something biodegradable that I could use for some sort of act of care on the land that could be left there without causing the additional harm of added plastic detritus.

Figure 4.5: Washing foraged plastic. September 2019.

4.3.2: *Paper*

I then returned to knotweed, and since it seemed unwilling to be cord, I wondered if instead I could use it to make paper. As much as I could, I tried to source the equipment

needed for paper-making used or second hand, in order to avoid contributing to capitalist consumption of plastics and other finite resources, which would have been counter to the purpose of the project. From a thrift store, I got a big plastic storage bin to use as a vat. There I also found a large stainless-steel pot, large stainless-steel spoon, two identical wooden 8 x 10-inch picture frames for making a mold and deckle, and a big piece of felt for couching the wet paper. The ocean provided a plastic bucket, which I found floating while out kayaking and managed to strap precariously to my back deck while I bobbed around on swells that were bouncing off a headland. On a cobble beach I found a short and thick piece of old solid wooden floorboard to use both as a cutting board and for pressing the water out of the paper and felt. Unable to find them used or otherwise drifting about the world, I did end up purchasing a few new things: some wire window screen and foam weather stripping for the mold, rubber gloves (all of the gloves provided by the ocean had holes in them), and a small blender, food processor, and hot plate. I reasoned that these items would (hopefully) last for a while and potentially enable me to repurpose even more materials.

After acquiring all of this equipment, I first tried using some of the year-old dead and dried knotweed stalks, hoping that their fibres would more easily come apart in water. But, after soaking them in water for a couple days, the pieces of stalk were still just as solid. I tried boiling these stalks, which made no difference (Figure 4.6). I tried soaking them for days and then boiling them with washing soda, but the fibres still refused to separate. I tried putting them through a food processor after being cooked, both wet and dry, and this resulted in a lot of noise and some terrible-smelling smoke coming out of the machine, but did not result in the fibres breaking apart. In short bursts (to give the food processor time to cool and recover), I slowly managed to chop it into smaller pieces. But,

since this was just pieces chopped smaller rather than fibres separated, when I tried to pull sheets of paper from the resulting pulp, they were crumbly and would not hold together. I tried adding cornstarch to the vat, but it made no difference. I tried all of these same things with fresh stalks that were not already dead and dried, and the result was the same except that the resulting soggy pieces were darker in colour than in the previous attempt. I tried all of these things in different orders, including spreading the pieces out on the concrete floor and jumping and stomping on them (Figure 4.7). The result of this was a big mess, but not separated fibres. I wondered if the rubber soles of my boots were too soft, so I went to the thrift store and got some second-hand boots with harder heels and tried again. This seemed to make a bit of a difference in breaking the fibres apart, but it was nowhere near enough, and stomping on a concrete floor with hard-soled boots was very jarring and unpleasant and quickly gave me a headache. Next, I tried pounding the pieces with a rock against the concrete floor. This was time-consuming and labour-intensive, made my arm sore, was loud and disruptive, and also headache-inducing for both me and my studio-mates. But, it was working. So in short somewhat-tolerable bursts over the course of a few days, I hit the pieces of knotweed with the rock until they were mostly a coarse pulp. I tried to make paper out of this, but the result was more like the material of coconut fibre plant pot liners than like paper. I formed some of this pulp over some plastic bowls hoping to make plant pots or baskets. This was somewhat successful, but the fibres wouldn't always stick together, making the bowls a little bit crumbly. I tried adding cornstarch to the mixture, but this again made no difference.

Figure 4.6: Uncooperative knotweed pieces after being soaked and boiled. October 7, 2019.

Figure 4.7: Stomping on knotweed stalks, September 2019.

Then, I tried using the leaves to make paper. After cooking them in washing soda, the leaves were much more willing to break apart into a mushy pulp in the food processor than the pieces of stalk had been. The pulp was a bit clumpy, but it did manage to hold

together a bit better than the pulp from the stalks (Figure 4.8). But, just like the cord also made from the leaves, the pieces of "paper" made from this became stiff and brittle when dry.

Figure 4.8: Crumbly attempt at knotweed paper. October 2019.

One interesting outcome of boiling the different parts of knotweed was the leftover water of varying colours. I saved some of this and later dipped pieces of recycled paper in it to create different colours of paper. Water from cooking the leaves made the paper a deep dark reddish brown. Water from the fresh stalks made a lighter reddish brown, and water from the old dried stalks produced a light yellowish brown (Figure 4.9). Others have used knotweed for dye, and in doing this I discovered some of the variety of colours it can produce. However, I currently have no need for vast quantities of varying shades of brown dye.

Figure 4.9: Paper experiments with various parts and stages of knotweed, recycled paper of different compositions and mixes, colour from boiling various parts of knotweed, and various combinations of these. October 2019.

I had been hoping to make paper by hand from just the knotweed, but it wasn't working. It would likely work with a mechanical process (stronger than my little food processor or beach stone pounding against a concrete floor) for breaking up the fibres, but was too physically taxing to do by hand. I ripped up some paper from the recycling bin, soaked it in water, put it through the blender, and added it to the vat of knotweed pulp. This finally resulted in something that could actually be called paper. It seemed a bit like a failure because, rather than making paper from knotweed, I had made paper from paper with some knotweed fibres in it. But, given the abundance of used paper and paper products being used or wasted, discarded, filling recycling bins, and maybe or maybe not actually being recycled, it did seem appropriate to use some of this in my paper-making

endeavours. Paper, like plastic, is a material that many of us in capitalist consumer cultures use too much of and discard, often without a thought towards the impacts of our use and abuse of this resource.

4.4: Failure and Adaptation

All of this comedy of failures in my attempts at making cordage or paper from knotweed does not mean that this was all a waste of time. As J. Halberstam (2011) argues, in failure there is space for "ways of being and knowing that stand outside of conventional understandings of success" (2). They explain that "success in a heteronormative, capitalist society equates too easily to specific forms of reproductive maturity combined with wealth accumulation" (2). Outside of these ideals, there is an abundance of possibility for creative reimagining and becoming (Halberstam, 2011). Halberstam argues that, because queerness is the opposite of succeeding at being heterosexual and cisgender, "failing is something queers do and have always done exceptionally well" (2011, 3). This sort of failure, they argue, exposes the inequalities and oppressions embedded within such ideals (Halberstam, 2011). Had I been "successful" in my attempts to shape knotweed according to my wishes, I might have found some interesting and generative ways to work with this material. But, in "failing" at my knotweed endeavours, I discovered so many other things and followed multiple other interesting threads. I found threads to follow in experimenting with recycling used paper as a way to be responsible to the paper material and therefore also to the ecosystems that provided this material, used in the process of doing a PhD program. I learned more about knotweed, and expanded my ideas about what kinds of gifts a plant might have to offer. Applying Halberstam's concept of the queer art of failure to environmentalism, Nicole

Seymour (2012) proposes that, instead of thinking in terms of success or failure, we ought to instead think in terms of adaptation and flexibility. The knotweed itself is highly adaptable, managing to grow in a variety of disturbed landscapes and to evade various dedicated attempts at its eradication, even at times to push through two inches of concrete or regenerate from being buried three feet underground (Parkinson & Mangold, 2010). And the knotweed forced me to be adaptable when it refused to conform to my visions for it. By being adaptable and embracing the emergent quality of process- and arts-based work (Leavy, 2015; Schechner, 2002), I found myself down various other avenues with still much more to be explored. In addition, knotweed's resistance to change according to my efforts to shape it could be analogous with settler resistance to change. Just as it can often be a struggle to convince invasive colonial humans to change behaviour to be less invasive, this highly invasive plant also stubbornly resisted.

At the time, tired of fighting with knotweed in what was feeling like a fruitless endeavour, and more pleased with the results of simply recycling paper, I gathered up all of the recycled paper products that I could find in recycling bins both in the house where I was staying and at the gallery. Without going out of my way to find extra products, I easily collected—in the form of cereal boxes, other food packaging, junk mail, art festival booklets and leaflets, cardboard boxes from purchased kitchen appliances, etc.—more paper than I was able to deal with. And, I discovered that a lot of this paper that seems to be just paper actually has a layer of plastic on it, which is often difficult to separate from the paper material. Some paper with shiny print has metal foil on it, which, when recycled by hand, results in what looks like little balls of tin foil stuck in the finished paper product. Other shiny print flakes apart in the pulp and results in glittery paper. On one hand, these are microplastics, which are undesirable. But on the other hand, this plastic

will eventually become microplastics anyways, so I may as well make use of it by making enjoyably sparkly paper (Robson, 2012). I experimented with separating unbleached brown paper fibres, bleached white paper fibres, and paper dyed different colours or with a lot of colourful ink, as well as various mixes of these.

I had been hoping that I would be able to use this handmade paper to reduce the impact of my paper consumption as I worked on writing a dissertation, but I did not produce anything suitable to go through a printer. I had already, for a couple of years, been saving all of the paper that I used—for printing and revising drafts, jot notes, outlines, lists, plans, etc.—once I'd used both sides, and then sewing half pages together with threads of marine debris rope to make nonsensical booklets composed of fragments of my own sentences and scribbles, mixed with whatever else was already printed on one side of whatever partially-used paper I'd scavenged from recycling bins. Repurposing this paper myself was a way of enacting material responsibility towards the paper that I had used, as well as to the trees and ecosystems that went into its making. While it would have been nice to be able to recycle my own used paper and then use it again and again, never having to purchase new paper products, the need for printer paper remains. This could be looked at as another failure. But this handmade recycled paper is useful for other things, such as making notebooks, cards, and various other creative applications. And this "failed" endeavour, like my experiments with knotweed, also yielded something different from what I'd hoped, which was also interesting and generative in unexpected ways (Halberstam, 2011).

4.5: Small Acts of Care

My original plan, after finding a way to make cord from knotweed, was to then use the resulting cord to make some gesture of mending in a place where exploitative, colonial human actions had caused destruction (Bendell, 2018; Davis, 2017; Demos, 2017a; Gan et al., 2017; Haraway, 2016; Rose, 2017; Tsing, 2015). However, not only did my initial plan to make cord from knotweed not turn out as I'd hoped, I also learned that knotweed is so prolific at invading that it can reproduce from just a piece of the plant, not necessarily even a seed or a root (Parkinson & Mangold, 2010). Had I made cord from knotweed and then taken the cord to some place other than where I harvested it, I could have inadvertently contributed to the spread of this highly invasive plant. So instead I used cord made from day lily leaves, as well as some of the recycled paper that I had made from used paper, in a public performance of mending land.

On a hillside above the cobble beach at Middle Cove just outside of St. John's, many small spruce trees had been messily cut with an axe, presumably for the misguided purpose of using green wood to fuel one of the many beach fires that regularly happened on this popular beach. In between the cut tree stumps, there were many tiny spruce saplings just a few inches to a foot tall, some of which appeared to have already been stepped on, the others at risk of being trampled. In a performance, I used a piece of my recycled paper and some day lily cord to make a bandage over the cut part of one stump, and used more cord to weave a small protective fence around a sapling that grew beside it (Figure 4.10). Since a bandage made of paper on a cut tree stump cannot bring it back to life, and a foot-high fence woven from dead leaves is just as vulnerable and at risk of being stepped on as the sapling that it surrounds, this was in part a performance of what feels like futility in trying to enact some sort of healing on disturbed land: in this

particular instance, land that continues to be trampled and cut by humans and eroded by anthropogenic climate change induced sea-level rise. At the same time as this was a performance of futility (Seymour, 2012), it was also a performance of a gesture of honouring the life of a tree that took who-knows-how-many years to grow to all of maybe a three-inch trunk diameter in such harsh conditions (Creates & Trant, 2010), and the hopeful efforts of a tiny tree that aspires to do the same. It was an act of developing relationship that called others to notice, pay attention, and join in considering how to enact care on disturbed land.

Figure 4.10: Repair and protection in a site of disturbance. Middle Cove, Newfoundland, October 12, 2019.

My interest in and attention to small trees was in part influenced by Marlene Creates' work "Our Lives Concurrent for 58 Years Until the Hurricane, Blast Hole Pond Road, Newfoundland, 2010." In this work, Creates had slices taken from the trunks of trees that were downed by Hurricane Igor examined under a microscope by a biologist to count the rings (some of which were only one cell thick) and determine their ages

(Creates & Trant, 2010). She found that, despite their mostly diminutive size, they were all older than she was (Creates & Trant, 2010). In the forest, Creates placed small metal markers by each stump, indicating the age at which they died—many of them over a hundred years old (Creates & Trant, 2010). Some of them could only be determined to be over a certain age because of rot at their core which made counting all of their rings impossible (Creates & Trant, 2010). As the title of the piece suggests, all of these downed trees had been growing there for the duration of her entire life up to that point (she was 58 years old at the time), and long before (Creates & Trant, 2010). This is a gesture toward understanding the layers of time that make up any one place. Although 58 years is just a blip in the grand scheme of deep time, the title suggests the multitude of things that were going on concurrently for 58 years—the multitude of things that each tree might have seen and experienced, and the multitude of events and interconnected relationships that might have existed in that place in that time, concurrent to all of the events and experiences that can happen in a human life in that amount of time. Rather than just framing the trees' lives in relation to one particular human life, Creates asks the viewer to also consider the human life in relation to the trees, and perhaps also the layers of time and history and relationship far beyond one's ability to observe or comprehend that comprise every landscape (Creates & Trant, 2010). I wondered how old each of these messily and carelessly chopped trees on the cliff above the Middle Cove Beach had been, what changes they had seen in their environment, and what they had weathered and survived in order to grow to such a modest size. I wondered if considerations of such things might make us less inclined to chop.

4.6: Blueberries and Reciprocity

While the focus of this work was on invasive plants and waste, I also considered how to form a decolonial settler practice of harvesting native plants. While I was hiking the Sugarloaf section of the East Coast Trail, I came across an abundance of blueberries on the cliffs overlooking the harbour. I wanted to harvest some, and to learn to do so without the entitlement that I had learned from my settler colonial culture. Kimmerer's (2013) concept of the honourable harvest includes not taking the first or the last, never taking more than half, not taking more than is needed, nor wasting any of what is harvested, and sharing the harvest with others. These all seemed easy enough to follow. The honourable harvest also includes knowing "the ways of the ones who take care of you, so that you may take care of them" (Kimmerer, 2013, 183). It involves asking permission, listening for the answer and respecting that answer if it is no, only taking what is given, showing gratitude, and acting with reciprocity (Kimmerer, 2013, 183). These latter principles seemed to be where there is the work of decolonizing. In the past, I have been excited about discovering an abundance of blueberries or cranberries and eagerly taken more than I should have. I was grateful to have such bright and tart berries, made from summer sun and boggy water and thin rocky soil, and was glad to take them out of the freezer in winter months and remember the summer sun that made them, but I did not question my entitlement to them, nor consider how I might act with reciprocity toward the land and the delicate vines that had produced them.

The abundance of blueberry bushes laden with berries on these cliffs grew from what appeared to be solid rock with just a light scraping of soil. They were battered by a wind so strong that it very nearly blew me off my feet multiple times; still, somehow these plants managed to burst forth with an exuberance of berries. I walked carefully,

trying not to step on and crush any of these plants. Amongst the abundance I collected and ate many, and while doing so considered the various components of the honourable harvest. I didn't take the first or the last, I took far less than half, and there was certainly still an abundance for other beings to share (Figure 4.11). But I wasn't sure what I might do to show gratitude to and act with reciprocity toward these tiny bushes and this rugged rocky cliff that produced such an abundance of gifts in such a harsh environment. Like Creates' (2010) small fallen trees that had lived concurrently with her for 58 years and many more years before, I wondered how old these tiny bushes were. I wondered how their roots were all interconnected beneath the soil, and what collaboration of movement of water and nutrients and creatures was responsible for their thriving, and whether I could support that in any way. I sketched one plant that seemed to me to be particularly miraculous that was just a couple of inches tall and only had a few leaves on thin, frail-looking twigs (Figure 4.12). Yet this plant still somehow managed to have produced three berries, which, combined, appeared to have more mass than the rest of the plant altogether. I questioned how I could show gratitude, give back, or come anywhere near reciprocity in relationship with the hillside, rock, salt mist and strong wind that produced each berry. I could tread lightly, not take too many or waste, I could share and appreciate each one, and collect any garbage that I came across, but this still seemed to be more of a mitigation of negative impacts rather than having any positive impact.

Figure 4.11: Pkwiman (blueberries). Quidi Vidi, Newfoundland, October 1, 2019.

Figure 4.12: Blueberry sketch. October 2019.

D’Arcy Wilson, in a video performance work titled “#1 Fan” (2016 - ongoing), runs and leaps through various snowy and mountainous scenes, cheering, whooping, and repeatedly yelling “I love you!” at the scene before her. In some scenes she is wearing a multicoloured snowsuit embellished with sequins, hearts, and “#1 Fan” embroidered on the back, and in others she wears colourful workout clothing and a headband reading “#1 Fan” (Wilson, 2016). In some scenes, a silver foil heart-shaped balloon tied to her backpack floats and bounces above her head, and in others she waves bright yellow cheerleader pom-poms, or exuberantly throws a bouquet of flowers that then unceremoniously fall to the ground (Wilson, 2016). She jumps and flails, falls down, and continues to shout her professions of love (Wilson, 2016). She occasionally stops, appearing to listen in wait for an answer that does not come, and her declarations of love become increasingly frantic and breathless (Wilson, 2016). This work speaks to the disconnection that results from exploitative colonial relationships to land. Seeking connection, Wilson’s “#1 Fan”—like so many environmentally well-intentioned settlers on Turtle Island—bursts into the scene, causes a ruckus, frightens away the more-than-human beings, and ultimately, fails to find connection. Her shouts and hollers are met with silence, her leaping and flailing is met with stillness, and her proclamations of love are seemingly unrequited.

On the rocky hillside above the ocean, I wondered how to enact reciprocity and gratitude beyond a negation of negative impacts. Striving to minimize harm is a part of the honourable harvest, and spending the time to know the plants who give is another. But what about gratitude and reciprocity? While I didn’t actually leap about and yell “thank you” or wave around plastic pom-poms like Wilson’s “#1 Fan” character, I wasn’t sure

how to get past the well-intentioned but misguided settler attempts at offering gratitude or reciprocity to land.

4.7: Conclusion: Unexpected Gifts

After all of this, it seemed as though my efforts over the course of two months had been a failure—I had failed to figure out what to do with knotweed, how to enact caring toward land, and how to act with reciprocity toward blueberry bushes. But perhaps part of the problem was that my approach had still been somewhat rooted in a settler colonial understanding of my role in relation to plants—even invasive plants. I tried to mold the knotweed into what I wanted it to be, and what I thought would be useful. I tried to mold it into a thing, rather than trying to learn from it in order to work together with this potential plant collaborator. These two months of experimenting led me to discover that, while knotweed might indeed be able to become paper through some methods beyond the tools I had at hand (others have successfully done this) (Varine, 2022), perhaps it might also have some other gifts to offer that I hadn't noticed or considered (Kimmerer, 2013). Perhaps the best course of action isn't just to figure out how to use this plant as a resource in order to eradicate it (or more realistically, very *very* slightly reduce it), but rather, to learn from how surrounding ecosystems and multi-species entanglements adapt. In a paved parking spot next to a patch of knotweed across the street from the house where I was staying in Ktaqmkuk, knotweed shoots had forced their way up, breaking through the pavement (Figure 4.13). While knotweed's ability to break through pavement is unlikely to be considered a gift by the owner of the parking spot, perhaps knotweed might be able to offer its ability to break up excessive pavement and "wasteland" landscapes that are otherwise rather unfriendly to most other plants, in order to let light and water and

nutrients back into the soil. While it is questionable that any other plants, especially native ones, might eventually be able to take hold and thrive again in such places given the competition presented by knotweed (Parkinson & Mangold, 2010), it seems that, in some cases, a proliferation of knotweed might be preferable over an expanse of pavement.

Figure 4.13: Knotweed growing through pavement. October 8, 2019.

My attempts at making cord and paper from knotweed may not have been "successful" in the way that I had imagined, but as it turns out, these failures were far more generative than might have been any "success" (Halberstam, 2011). These experiments were just the beginning of more potential explorations with this plant as well as the other unanticipated directions that this project followed. Trying to make something useful out of invasive knotweed was a way to try to reduce its presence to make space for other plants, and also to try to use this material in order to reduce the need to extract other resources, like trees, for such things like paper. The explorations with knotweed continue beyond the scope of this dissertation, and it may become integrated into my work in

unexpected ways. And perhaps one of the lessons to be learned from knotweed is how *not* to behave as an introduced species on Indigenous land. Either way, I also discovered that the amount of waste paper and paper products that pass through my hands is more than I can keep up with recycling into new, handmade paper myself, but it is still worthwhile to do as an act of responsibility toward materials and the landscapes from which they are extracted. There are endless places and beings and things that are in need of small acts of care, and to think about them all can be overwhelming. But through this work I found that paying attention to what is in front of me is possible, and this is what is necessary in order to learn from plants, move toward collaborating with plants, decolonizing, and growing livable futures.

Chapter 5: In Memory of Small Things

5.1: Introduction: Devastated Landscapes

While the previous two chapters have dealt with creative methods of enacting care in response to small aspects of the climate and biodiversity crises (plastic marine debris, and invasive knotweed and waste paper), this chapter asks questions about how to enact care in places where it seems too late, and where it seems that there is nothing to be done and nothing left worth saving. I explored these questions within a clearcut and then blasting zone, adjacent to the Birch Cove Lakes protected wilderness area just outside of Kjipuktuk (Halifax), in Mi'kma'ki (Nova Scotia), over the course of a few years. Inspired by Shawna Dempsey and Lorri Millan (1997), I did this first using a method of performance as research by inventing and performing the role of a queer, aiming-toward-decolonial park ranger. Later I continued to explore these questions by observing, documenting, remembering, and performing what felt like futile acts of care for doomed features of a disappearing landscape. Working from the tensions inherent in being a settler who benefits from and is therefore complicit in the capitalist colonial system that was the cause of so much ecological destruction (Davis, 2017), I used arts-based methods to experiment with possible ways of decolonizing settler relationship with land and place. By working to develop settler methods for building decolonial reciprocal relationship with land and being responsible to treaty in Mi'kma'ki, this project aimed to tend to and mend relationships of kinship that form and support webs of life.

The work described in this chapter was in response to calls such as Haraway's (2016) to "stay with the trouble," and Lee's (2016) to find that wastelands are not necessarily beyond hope. It was a way of questioning, along with Rose (2013), what it

means to grieve for more-than-human kin amidst a mass global extinction event. Along with Gillespie (2016), Haraway (2016), Kettleborough (2019), Puig de la Bellacasa (2017), Rose (2013), van Dooren (2014), and others, it questioned what it means to care in the midst of disaster, and engaged in a practice of witnessing and tending to memory as a form of care. By paying attention to the layers of history and stories embedded in the geology of any area (Bjornerud, 2018; Bubandt, 2017) and the "ghosts" of past multi-species assemblages that make up present landscapes (Gan et al., 2017), this project tended to memory in a landscape that was and still is rapidly changing. It thus resisted what has been called "shifting baseline syndrome," which is the forgetting of past versions of a landscape or ecosystem (Challenger, 2012; Gan et al., 2017; Papworth et al., 2009; Svenning, 2017), or the "tendency to imagine that environmental conditions at the edge of our own memories represent the way the world used to be" (Svenning, 2017, G68, citing Papworth et al., 2009). While ecosystems are constantly evolving and changing, the rate of change in the current moment of mass extinction (Bendell, 2020; Challenger, 2012; Kolbert, 2014) is such that some baseline of ecological knowledge can provide context for recognizing sudden and unprecedented losses that result from anthropogenic actions (Gan et al., 2017). Ecological literacy also provides context for understanding our place in the web of the living world (McKibben, 2005; Svenning, 2017), and for settlers, this is crucial to learning how to decolonize and change invasive behaviour.

In Mi'kma'ki, the Peace and Friendship Treaties require settlers to refrain from interfering with Mi'kmaw ways of life, which necessitates being in respectful and non-disruptive relationship with the Mi'kmaq and more-than-human communities (Battiste, 2016; Wicken & Reid, 1996). However, like in most colonized places, settlers in

Mi'kma'ki have violated treaty for centuries, working to erase Mi'kmaw peoples and interconnected multi-species communities from land (M'sit No'kmaq et al., 2021; McMillan & Prosper, 2016; Palmater, 2016, Prosper et al., 2011). Settlers currently living in Mi'kma'ki have an obligation to adhere to treaty by working to undo these centuries of treaty violations and learn to live in peaceful relationship in Mi'kma'ki. One way to do this is by learning from the Mi'kmaw land-based concept of M'sit No'kmaq (M'sit No'kmaq et al., 2021, 848), which means "all my relations," and refers not only to human family, but the whole world of more-than-human relatives to whom one is connected (Doucette & Hache, 2021; Hurley & Jackson, 2020; M'sit No'kmaq et al., 2021; Young, 2016).

This chapter outlines a project that aims to enact settler responsibility to treaty by working to decolonize relationship with more-than-human kin and with land by learning from M'sit No'kmaq and learning what a settler engagement with this concept might look like. It does this through a practice of witnessing, remembering, and enacting care in the real space of a damaged landscape in order to directly observe and understand an instance of destruction that results from colonial entitlement to land, in order to find out what sort of practical engagement works, and what doesn't. This project finds that, despite an inability to stop irreversible destruction in chains of events that are already underway, "staying with" (Haraway, 2016) by witnessing and remembering informs the enactment of care (Conley, 2016) and forms the foundation of a practice of decolonizing relationship. This makes such losses legible as losses, worthy of grief (Lee, 2016), and insists that more-than-human beings are indeed kin and that they do in fact matter greatly. All of this resists the tendency to avoid problems that feel too big to solve (Seymour, 2012) and the "comic faith in techno-fixes" (Haraway, 2016, 3). It supports the imagining

of possible livable futures (Matthews, 2017). As Wells (2021) explains, “if our descendants are alive and well in a hundred years, … it will be because we were, in this era, able to articulate visions of life on earth that did not result in their destruction” (8). This will not happen by waiting for techno-fixes or by looking away from the problems; rather, “staying with the trouble" (Haraway, 2016) is key to being responsible to collaborative world-making with communities of living creatures with whom we are intertwined.

5.2: Birch Cove Lakes: Background[3]

I undertook this project in the Birch Cove Lakes, an area that is rife with tensions that arise between opposing pulls for protection, development as a park, or destruction of the landscape to make way for urban development.[4] For many years, I spent time hiking, canoeing, swimming, skating, camping, foraging, observing, and art-making in the area, especially along the shoreline and to the south of Susie’s Lake. The area that bordered the south edge of the protected area was not part of the area proposed as a park. But, having been forested, there was no physical evidence in the real space of the landscape of the imposed property line between proposed park and not. Winding trails meandered across this invisible line, making no distinction between one side or the other. Because it had been forested and was adjacent to the proposed park and was a part of the same network

[3] Words in this section are based in part on a previously published book chapter listed below. For copyright permissions, see Appendix B (pg. 240).

MacLatchy, J. (2020) Fieldnotes in marginal landscapes: Toward an Anthropocene ethic of care for small things. In C. Burkholder & J. Thompson (Eds.), *Fieldnotes in qualitative education and social science research: Approaches, practices, and ethical considerations* (pp. 46-60). Routledge. http://doi.org/10.4324/9780429275821-5

[4] For more information, see https://birchcoveranger.wordpress.com/2015/10/14/some-background-information/

of unofficial trails, it seemed as though it could have been a part of the proposed park, and many people thought it was (Hounsell, 2015). After the area was clear cut in the spring of 2015, while shocked at the changes (Hounsell, 2015), many hikers and mountain bikers continued to use the trails. I tracked the changes by finding formerly familiar places and trying to overlay memories of past forest and winding trails with the new landscape of wide open sight-lines dominated by the brown of broken chewed-up trees and gouged soil and stirred-up wetlands. At that time the shapes of bedrock and unchanged topography helped me to orient. I used geographical coordinates to find places where I had been and photographed before. Even though the places had been rendered mostly unrecognizable by the tree-mowing machines, there was usually something remaining to tie the past to the present. At the coordinates of a place where I had remembered finding a geocache hidden in a tree, I found the chewed-up plastic remains of that geocache scattered around and mixed in with the splintered tree bits. At the coordinates of a towering old white pine that I had climbed, nothing looked familiar, and I wouldn't have believed it was the same place at all if it weren't for the coordinates, and the tree debris at my feet that did look like white pine (MacLatchy, 2020) (Figure 5.1).

Figure 5.1: Mangled white pine stump. September 2015.

In the latter part of 2017, bulldozing began in some parts of the clearcut area. Machines scraped everything loose from the bedrock, resulting in big heaps of everything—bushes and plants, rocks and soil, moss and lichens—all jumbled together. Then, in the spring of 2018, I was walking along a trail that led to the clearcut when I reached a point where the bedrock had recently been blown apart. I recognized nothing in front of me as the trail abruptly ended at a new small cliff overlooking a jumbled moonscape of jagged exploded pieces of granite (Figure 5.2)[5]. During and after these

[5] This image is previously published in the book chapter listed below. For copyright permissions, see Appendix B (pg. 240).

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events, I continued to observe what I could of the drastic changes in this landscape from a safe distance (MacLatchy, 2020).

Figure 5.2: View from where the trail now ends. April 21, 2018. (MacLatchy, 2020, Figure 3.1c).

In all of this, I wondered about my settler responsibility to treaty and to the Mi'kmaw principle of M'sit No'kmaq. As a settler in Mi'kma'ki, this concept is not mine to claim or appropriate, but I also have the settler responsibility to learn from the land-based knowledge in the land where I live (M'sit No'kmaq et al., 2021): to learn some of what Indigenous peoples have known all along (Todd, 2016). M'sit No'kmaq is a call to attend to "all my relations," which, Hurley and Jackson (2020) explain, includes reflexivity as to one's own "identity and position in relation to the … research" (41). Throughout this project, I sought to learn how the landscapes and ecosystems and living beings who were being destroyed were my relations, and what this means for how I am responsible to them. This was an enactment of the ongoing and continuous process of decolonizing (Sundberg, 2014) my relationship with land in general, beginning with

attending to my changing relationship with a certain patch of land with which I had had a relationship prior to its destruction. I did this through two interconnected projects: first, through enacting the person of a subversive version of a park ranger for the area, and second, through a focused practice of witnessing and small acts of care.

5.3: Birch Cove Ranger

5.3.1: *Settler Responsibility and Stewardship*

In 2015, while I was the Fieldwork artist in residence at Eyelevel Gallery in Kjipuktuk, I enacted a project called Birch Cove Ranger, in which I performed as though I were the ranger of the Birch Cove Lakes and surrounding area. Inspired by Shawna Dempsey and Lorri Millan's 1997 performance work *Lesbian National Parks and Services*, I sought to use the stereotypical persona of the park ranger to question colonial and cisheteronormative discourses that divide and shape land, land-based knowledges, and relationships, and to draw attention to the layers of history, or, after Gan et al. (2017), what I would now call "ghosts." In this role, I engaged in general stewardship-type activities, walking the trails and observing where trees were unnecessarily and illegally being cut, picking up litter, and dismantling inappropriately-placed and unsafe fire rings. I tried to more clearly mark the trails with flagging tape in an effort to prevent excessive off-trail wandering and the formation of unnecessary braided paths and trampling of the undergrowth. With consideration for my own safety, the tendency for anyone other than older white men to not be taken seriously, and a general preference for avoiding confrontation, I didn't confront anyone directly about questionable behaviour. Rather, I made and installed informative signs where they seemed necessary, and wrote about my

observations in a blog.[6] Where someone had cut down living trees and then attempted with limited success to burn green wood, I made a sign explaining how fire works (Figure 5.3), and another suggesting that folks enact their hypermasculine lumberjack fantasies only on dead trees, or even find some actually useful outlet for this energy. (I returned to find that someone had burned the signs.) When someone spray-painted obscenities on the big white pine at the top of the hill overlooking Susie's Lake, I added a label as though it were a work in an art gallery, reframing the spray-paint as a statement on "white man's colonial struggle to dominate a landscape through the exaggerated performance of hypermasculinity" (Figure 5.4). This sign lasted for a few weeks before it disappeared, presumably also burned.

[6] https://birchcoveranger.wordpress.com

Figure 5.3: Informative signage. September 15, 2015.

Figure 5.4: Graffiti reframe. September 21, 2015.

5.3.2: *Layers and Ghosts*

Also in the role of Birch Cove Ranger, I led groups on hikes through areas that were not within the boundaries of the proposed regional park, but were nevertheless intertwined and connected. For the first hike, in the fall of 2015, I led participants through the area that had been clear-cut five months prior. After the tree-mowing machines had finished and left, over the course of the summer small green regrowth had occurred, making the scene and the scale of destruction less jarring. I had described the hike to participants as an exploration of the layers of time embedded in this landscape. After talking a bit about how land was always in flux, I invited participants to look, as we walked, for different layers of history that might be partially buried under other, more recent layers, and to gather words from the land for telling its stories (Figure 5.5).

I began the hike in a part of the woods that was still intact and followed the trail as it led into the clear-cut. I described this threshold as a border that was once invisible, drawn clearly on maps but not visible on the actual land, but which had now become starkly visible. Once we reached the highest point of land I pointed out the spectacular view, which would not have been visible if the trees were still there. Gathering together small stones and bits of splintered wood with words collected from the landscape written on them, participants cobbled together a story of this landscape, and spread it out on the ground. While we were taking in the view, I said to the participants:

> We are standing now, underneath a glacier, one kilometre thick ice above us.
>
> We are standing in the middle of a mix of tall forests, small spruce and fir forests, bushes and vines, exposed granite outcrops; all of which is habitat for deer, coyote, bear, moose, bobcat, and more. All around us, the land is alive. If you breathe quietly, you can feel it.

We are standing in the middle of a recent clear-cut, on the highest point around, with spectacular views of ocean, city, lakes, forests, sky and clouds and stars.

We are hovering in the air above the roofs of Zellers, Target, and Future Shop, above roads and bustling traffic.

We are in the sky, and below us, the city is growing, sprawling. If you listen, you can hear the bustle and hum.

Figure 5.5: Hike #1: Looking for Layers. Photo by Frankie Macaulay. October 7, 2015.

From this particular location, we had views of land in all stages of transformation between forest and big box stores or industrial operations. We could see the roads and highways, parking lots and stores of Bayers Lake Business Park, and buildings in Halifax. We could see an area further south that had already been cleared and blasted and flattened into an expanse of crushed rock in preparation for development, and we could see the

landscape that we stood in—the recent clear-cut, trees mowed down but evidence of their existence still visible, and one summer's worth of small green regrowth. And to the north we could see the forests and lakes of the Blue Mountain and Birch Cove Lakes area. In resistance to shifting baseline syndrome, this guided hike/performance aimed to draw others into joining me in looking for the contours of the former landscape in the new one. Finding these contours—finding places where memory of the past landscape is visible in the present landscape—assists in remembering that a certain wasteland was not always a wasteland, might not actually be completely a wasteland, and does not have to remain a wasteland (Lee, 2016).

Gan et al. (2017) explain this kind of tending to memory of destroyed landscapes and lost ecosystems as a way of learning to see "ghosts" in the absences in present landscapes (G1). Because ecosystems are built from complex entanglements of relationships, "extinction is a multispecies event" (Gan et al., 2017, G4), such that the loss of one species inevitably affects all others through the "destruction of long-evolving coordinations and interdependencies" (Gan et al., 2017, G4). Because species evolved collectively in ecosystems of entangled interdependencies, when any one species is lost, they leave gaps and holes in the fabric of life (Gan et al., 2017; Svenning, 2017). These gaps and holes are where the ghosts are located. They are in the tears in the web of ecosystem that leave other species hanging, with certain needs unmet, potentially also at risk of endangerment or extinction.

Landscapes are full of evidence of such ghosts, but it takes some level of awareness to be able to see them. Bubandt (2017) talks about rocks being full of the ghosts of all the past geologic and biologic processes that went into their formation, explaining that "the building blocks of every pebble are constituted—in addition to

minerals—by a complex of amorphous organic matter, traces of the ancient and strange biology trapped within" (Bubandt, 2017, G136). The bedrock of this particular landscape is granite, and being an intrusive igneous rock, it seems perhaps further from traces of ancient biology than sedimentary or metasedimentary rocks. But regardless, in this rock record there are other ghosts of "vanished landscapes" (Bjornerud, 2018, 24). Where the bedrock remains intact, glacial striations and glacial polish are traces of worlds tens of thousands of years past in which glaciers carved away layers of rock and left behind the present undulating topography. Even where the bedrock has been blasted apart, erasing surface details, the type of rock still reveals some of the ghosts of all the worlds even further—hundreds of millions of years—in the past, that were made and unmade in the tectonic shifting, compression, folding, subduction, and intrusion of felsic magma that led to the formation of the rock itself.

In the time between clearcutting and bulldozing, the ghosts of all the trees that were mowed down were easy to see in their shredded stumps and broken bits of wood scattered everywhere. It was also fairly easy to see that there were ghosts of all the nesting birds who were killed, and of salamanders, frogs, and more. There are bits of these ghosts visible at the raw edges where the still-intact landscape abruptly changes to destruction, where the torn roots and broken branches reach toward their missing neighbours. There are ghosts of streams where water still persists in finding its way and forms new paths underneath and through jumbled rock. And, there are a multitude of ghosts that I haven't learned how to see—ghosts of species who were missing from this landscape, like caribou and moose, long before its most recent destruction, ghosts of species who were there but whom I hadn't yet learned to see, and ghosts in layers of entangled human histories (Matthews, 2017). Being attentive and learning to see these

ghosts can remind us of what is at stake when we consider remaking landscapes such as this one.

I had previously thought about and referred to this concept as “layers” in my Birch Cove Ranger guided hikes— the layers of history and change, including the various actors and forces and relationships that created a present landscape—but the term “ghosts” offers an animacy and liveliness that “layers” does not (although most likely there are many layers of ghosts in every landscape). In the devastated landscape south of Susie’s Lake, watching the progression of events that changed it into something completely unrecognizable from what I had known of it before was a way of tracking ghosts as they emerged in order to follow their transformations and see where they came to reside (Figure 5.6). This was also an effort to learn to see similar ghosts in the adjacent landscapes of everyday: busy streets, houses and buildings, big box stores, and expansive parking lots. It can provide knowledge of what kinds of vital and lively multi-species assemblages were, and maybe still are, possible (Svenning, 2017), and awareness of some of the knowledges held by Indigenous elders and others all along, despite colonial attempts to erase them (Jardine, 2019).

Figure 5.6: Bushes and soil compressed into layers. September 15, 2020.

Perhaps if this area south of Susie's Lake were left alone by bulldozers and dynamite for many years, plants would begin to move in and grow again, and animals would once again find it habitable. Perhaps after a few hundred or thousand years, there might be a similar ecosystem where the previous one was erased. After a further few hundred million years, continents will have shifted, and that jumbled granite could become compressed into a conglomerate or metamorphosed into gneiss, folded in with other rocks or subducted back down into the Earth's crust. Or maybe at some point this landscape will be under water, those jagged rocks becoming polished into smooth cobbles. But the ecosystem that formed and lived in this particular place is now gone. On the timescale of the planet, the 12,000 years or so since the last glaciation is not much time at all, but on the timescale at which that insignificant patch of forest was obliterated, and on the timescale of human lives and of the lives of the beings within that landscape, 12,000 years may as well be an eternity.

5.3.3: *Porous Borders*

For the second guided hike, I led participants on a trail that follows a stream and wetland that flows from a culvert under the Bicentennial Highway near the Chain Lake Drive underpass. Before beginning the hike, I distributed amongst participants a handful of different maps of the area, and asked them to use these to help us find our way. One map depicted the proposed regional park, including a delineation between front-country and backcountry areas and proposed parking spaces, access points, and trails. Other maps depicted delineations between land municipally zoned for different purposes, between different geological zones, and delineations between sub-watersheds. There was a road map, a map from the crowd-sourced trail-mapping app AllTrails, a screen-captured satellite image from Google maps, and a print-out of a photo of a section of a 1982 topographical map of the area found in the municipal archives.

As we walked, I asked participants to look for clues to determine our whereabouts on the maps. Predictably there was some confusion because I had distributed so many different maps, but there was further confusion because, in the real space of the land, many of the lines drawn on those maps were not visible at all. The privately-owned lands slated for development appeared no different from the lands that are labeled as protected wilderness areas, despite the clear lines on maps distinguishing the two. City zoning delineations were equally invisible. We came across an area where trees had been flagged with pink tape that read "wetland delineation" (Figure 5.7) and looked along this line to see how the location of the line had been determined. We found that the actual distinction between wetland and not-wetland appeared less precise, and, further, the evidence (distribution of waterborne plastics and other detritus, and erosion) suggested that the line was constantly in flux. In addition to wetland delineations, we looked for borders between

city and nature, demarking geological differences or waterways and floodplains, and while we found a lot of evidence for these lines, what was even more evident was that these lines and the land were constantly changing (Figure 5.8).

Figure 5.7: Wetland delineation flag tape. October 24, 2015.

By understanding borders as porous and shifting rather than absolute, through this guided hike I invited others to question the role of colonialism in drawing some of these borders and actually shaping land, and then how each of us may be complicit in this process (Gosine, 2010). By asking participants to join me in paying attention to the flux of boundaries in the landscapes, I hoped to foster an ecological literacy that would support a practice of continuing to look for shifts and changes in every other landscape. By drawing attention to the porosity and indeterminacy of borders, I aimed to highlight

Figure 5.8: Hike #2: Porous Borders. Stream full of plastic. October 24, 2015.

the interconnectedness and interdependencies in the more-than-human world. I hoped to show that most lines between humans and the rest of the living world are just as fabricated as some of the mapped lines that we looked for and didn't find in the real space of the land. Imagining that it is possible to divide up the living world with rigid borders supports the delusion of human exceptionalism. Learning to see them as either arbitrary or as real but permeable and shifting highlights the inextricable interdependency of humanity with the rest of the living world. Part of what allows certain landscapes to be considered as unimportant and therefore of no great loss if they are destroyed to make way for "progress" is the indirect making of wastelands by the spread of pollution and toxins. While the area surrounding the stream and wetland along which we hiked isn't in the protected area, it flows into the protected area, carrying debris and contamination with it. By highlighting how human lives and survival are interdependent with the rest of the

living world, this performance/guided hike aimed to show that waste and wastelands cannot be contained or kept separate from everywhere else.

5.4: In Memory of Small Things

5.4.1: *Enacting Care and Making Kin*[7]

A few years after this 2015 residency, I continued to observe and track changes in the clearcut landscape as small bushes and plants continued to regrow, some animals returned, and mountain bikers and hikers resumed using the trails. In 2017, after one area had been bulldozed and another had also been blasted and levelled, I walked, explored, observed, photographed, and took notes. As I tracked the changes, I focused my attention on three small entities within the landscape: a tiny white pine tree, a small pond, and a patch of blueberry bushes. I repeatedly visited these, and toward them I made small performative gestures that explored questions of how to be responsible to land, more-than-human relations, and to treaty, how to enact care, and how to do all of this in a destroyed and seemingly hopeless landscape. Attending to and caring for these specific things amidst an overabundance of countless small beings and things in need of care was a way of grappling with the enormity of the global problem on a small and immediate scale. In resistance to the impulse toward denial or turning away and doing nothing (Seymour, 2012), this project looked for concrete ways to act.

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[7] Words in this section are based in part on a previously published book chapter listed below. For copyright permissions, see Appendix B (pg. 240).

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This was an effort to, like Marlene Creates, assert the intrinsic value of the particular in the more-than-human world. In a piece titled “Bog Limit” (1994), Creates recounts her interactions with construction workers who were building a road through a bog. She presents three images that focus on the edge where the bog and the highway press up against each other, competing for space—but ultimately, it is the bog that is limited, not the highway (Creates, 1994). Creates’ memorial of the bog through the documentation of its destruction suggests that there is something worth mourning and worth remembering in the parts of that bog that were filled in by crushed rock. By extension this means that in every other built landscape there is also something worth grieving and remembering, whether we know what or whom that is. By recording a moment in the process of change that shows the past landscape and ecosystem that was being buried under the new road, Creates (1994) points to the multitude of layers in every landscape, even in those in which there is little left to visibly connect the past to the present (MacLatchy, 2020).

In the clearcut, I watched layers, such as those of Creates’ (1994) highway over bog, being formed, and in doing so, I tracked ghosts as they emerged. I found that the emerging layers were similar to layers that were still in places visible around the edges of the pre-existing parking lot. Around the more publicly visible edges, tidy green grass had been planted, covering what I imagine is likely a smoothed-over jumble of the same compressed remains of a former landscape. Around the less visible edges at the backs of parking lots or lumber yard, there were instead jumbled heaps of dead sod, broken patio tiles and wooden pallets, mangled shopping carts, discarded plastic strapping and sheets of plastic wrap and plastic labels, along with the usual array of take-out cups and food wrappers. Other than having a few decades worth of layers of detritus and weedy growth

since the Bayers Lake Industrial Park was built in the 1980s, these edges were the same as the newly formed edges of jumbled rock. These jumbled edges provided glimpses of what kinds of former entanglements of lives and landscapes are likely jumbled and compressed under the tidy sod, big box stores, parking lots, and roads (Figure 5.9). I wondered what past worlds were buried here, what forms that landscape had taken; whether there had been trails, big trees, bogs, and berries, and who had lived there (MacLatchy, 2020).

Figure 5.9: Unfurling fern at the edge of bulldozed rubble. June 10, 2020.

All of this bulldozing and building over layers of past worlds results from the view of more-than-human creatures and ecosystems as inanimate, or as mere resources available for human use, having no inherent worth in themselves. Albrecht (2019) explains that this devaluing of the more-than-human living world happens because of the death of the ability to feel emotions that connect us with the more-than-human world as kin. “Emotional death … occurs when some humans no longer even have a reaction to the

end, death, or loss of nature. There is no emotional presence to bear witness, as all remaining biota are ignored as irrelevant to the life processes of individual humans" (Albrecht, 2019, 67). This sort of lack of emotional presence enables a "metaphysics that holds the deaths of animals to be of no particular ethical import" (Rose, 2013, 145), and results in the erasure of living ecosystem communities without ever knowing the intricacies of who and what were there (Seymour, 2012). In part this results from the tendency toward denial, and avoidance of negative emotions such as grief, guilt, or hopelessness (Albrecht, 2019; Clayton et al., 2017; Head, 2016; Vince, 2020). Because, as Sara Ahmed (2004) argues, relationships are composed of emotions that occur at interactions, this lack of emotion indicates a severing of relationship from the life-supporting web of the living world. Thus, the death of emotions in response to more-than-human losses is in itself a form of extinction (Albrecht, 2019).

Part of what makes the destruction of a landscape such as this one seem so unremarkable is how commonplace it is—but this commonness means that the effects are cumulative. Trees and plants and everything living are removed and the ground is completely reshaped to make way for new buildings and roads all the time, and many would argue that it is better that this unexceptional landscape be destroyed than some other that is more ecologically important or aesthetically inspiring. Some people did express grief at the loss of this patch of forest and trails, and the destruction was briefly covered in the local news (Hounsell, 2015). But many would likely argue that this was a necessary sacrifice. The issue quickly faded from mainstream news and destruction carried on, seemingly unaffected. We all need apartment buildings and houses in which to live, and, given the current western capitalist structure of society, we also need stores from which to purchase food and other necessities, roads upon which to drive to get there

and back, and gas to fuel all of this moving around. This means that all who live and participate in a capitalist society—especially those such as myself and other settlers who have the privilege of benefitting from capitalism—are in some way complicit.

But complicity does not preclude understanding destruction of the living world as a loss. Paying attention, witnessing losses and destruction, and caring for unremarkable elements in this unremarkable landscape was a practice of resisting their illegibility *as* losses (Gillespie, 2015, 575). Butler (2004) questions "whose lives count as lives? … What *makes for a grievable life?"* (20, emphasis in original). Grieving for more-than-human losses defines these losses *as* losses, lives *as* lives—as lives which mattered greatly. As Lee (2016) writes, "mourning is about knowing there have existed creatures here worth saving who could not be saved" (n.p.). Recognizing and framing these losses *as* losses asserted that they were worth knowing and worth grieving for their own intrinsic value (Lee, 2016), and also for the lost multi-species relationships and collaborations and possibilities for future such entanglements in this space (Rose, 2017).

Rendering non-human losses as inconsequential is necessary for maintaining the narrative of human exceptionalism that supports the current capitalist world order. If humans are not exceptional and superior, if the more-than-human world has intrinsic worth and its collaborative functioning is what supports life, then the current capitalist system is inherently and fatally flawed. Therefore, making such losses visible and intelligible as losses resists the destruction of the living world, and opens up space for care (Albrecht, 2019). As van Dooren (2014) argues, "caring is always a practice of worlding" (294). Understanding, along with Haraway (2008; 2016), Tsing (2015), and others, that entangled ecosystem relationships are what actually make up the substance of species and living beings, by enacting care, this work was a turn away from the current

trajectory of mass extinction that is enabled by severed relationships and toward building possible alternative futures (Conley, 2016; Kirksey et al., 2013). It joins other creative works of world-making (including Creates, 1994, and many more) that enact "the very rupture most needed within our petrocapitalist complex" (Demos, 2017c, n.p.).

Aiming to work towards this most-needed rupture (Demos, 2017c), and inspired by Creates' attention to the particular in "Bog Limit" (1994) and other works, in the clearcut and blasted area I collected photographs, coordinates, observations, sketches, and notes with dates and times. I also collected artifacts: fragments of broken trees, flattened plants, and newly broken bits of rock. In an effort to track the changes and compare past and present, I looked through my old photos taken in the area before the cutting had begun, and found old maps of the area in the municipal archives. I sought to find places in this landscape that called for attention and care, and then to respond in ways that expanded notions of kinship. What follows is the story of my interactions with and the loss of three things—a tiny white pine, a small trashy pond, and a half-torn-up patch of blueberry bushes—which I later turned into three booklets containing photos and text, each one dedicated to the memory of one of these specifics.

5.4.2: *Small Tree*[8]

Before the clearcut and blasting in the area south of Susie's Lake, the highest point of land in the area had been marked with a cairn. Although the landscape was

[8] Words in this section are based in part on a previously published book chapter listed below. For copyright permissions, see Appendix B (pg. 240).

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drastically changed and the cairn somewhat disturbed by the machinery that did the clearcutting, the location of the pile of rocks and the topography (made even more visible by the elimination of trees) made the place still identifiable as a place that I had known before. As shocking and disorienting as the changes from clearcutting were, I became re-familiar with this new version of the landscape after many visits and much exploring. Then, two and a half years later, the next sudden change occurred: in the fall of 2017, the remaining soil and broken tree bits and loose rocks and all the plants that had begun to grow back were all plowed into piles of rubble. Twisted and broken and scrambled-up bits of trees and rocks and bushes and plants and lichens and moss were jumbled together in heaps, and the bedrock lay scraped bare, scratched and gouged. Despite all of this upheaval, still, somehow, life continued: cobwebs, strung between newly rearranged heaps of churned-up soil, caught the sunlight, spiders already busy repairing and rebuilding just moments after such devastation (Figure 5.10). Birds flitted amongst the piles of rubble, eating berries from broken bushes. Instead of gathering on trees, crows gathered on rocks and piles of debris, which had become the new highest perches. A frog jumped into a tire-tread puddle of mud and disappeared. Deer tracks marked the freshly settled mud between piles of disturbed rock, the deer perhaps having been up to the same

thing as I was—trying to reorient after the noise and dust had settled (Figure 5.11) (MacLatchy, 2020).

Figure 5.10: Spiders rebuilding. September 23, 2017.

Figure 5.11: Deer tracks. November 4, 2017.

After all of this plowing and scraping, there was one little white pine tree at the top of the ridge that had somehow been missed by the bulldozers. Having narrowly escaped being plowed away, it was still standing in between the tread marks of giant crushing machinery and scraped granite. Growing against all odds from a small bit of soil in a crack in the rock in the midst of a clearcut and destruction zone, this tiny tree about two feet tall seemed to be a manifestation of unreasonable, futile hope. I knew the tree would be gone sooner rather than later as the work continued. In the meantime, I wondered if it could feel the shock of destruction through its web of roots connected through rock crevices to other roots, now dead (Baluška et al., 2010; Simard, 2021). Over the course of a few months of visiting this tree, I watched as some bits of brown started to seep into its needles. I contemplated what could be done for this tree, or how I might memorialize this landscape that was losing its recognizable features before my eyes. It wasn't feasible to extract the little tree's roots from the cracks in the rocks in order to transplant it—to have attempted to do so would have been to kill it sooner than it was about to be killed anyway (Figure 5.12) (MacLatchy, 2020).

Figure 5.12: Small tree. September 23, 2017.

Before the clearcut, there had been some sort of elaborate abandoned camping setup with an extensive spread of debris in the woods, and when the machines came through, they mowed down the makeshift tents along with the trees. This area had not been bulldozed yet, and amongst this debris I found pieces of a string of red lights. One day in December of 2017, I collected all the bits of the strand of red lights that I could find, and took them up to the lone surviving small dying white pine at the top of the ridge, and carefully balanced the pieces on its branches. The light of the setting sun caught in the red plastic and appeared to set them alight (Figure 5.13). While unlikely to make any difference in the survival of the tree, this gesture of adorning the tree with broken plastic lights was an act of honouring its life (Clark, 2017) and the improbability of its survival so-far, and—should anyone have happened to notice the decorations—a call to others to join me in appreciating this little tree and questioning what it is that makes one tree special enough to be adorned with lights, the centrepiece of celebration, while others are treated as a weedy nuisance to be cleared away (MacLatchy, 2020).

Figure 5.13: Tree with broken lights. December 3, 2017.

I didn't visit the little tree for a while after that. The days were short, and spray painted markings on rock had appeared, suggesting that blasting would soon be happening in that area. I finally visited again a few months later in April of 2018 to find out if the tree was still there. On my way in, I passed the garbled remains of messy camping debris, and found one more piece of the strand of red lights. I took it with me and went to find the little tree, and the ridge, but instead, I found only chaotic piles of jagged blasted rock. I wandered around on the still-intact bedrock around the perimeter of the blasted area trying to see if I could recognize the shape of any bedrock, but I could not situate myself in the landscape that I'd known before. A mountain of the jumbled jagged rock scattered with bits of detonating cord was at the spot that seemed to be where the ridge and the little tree ought to have been, so I put the short strand of broken lights near

the base of this unstable and threatening heap, and left (Figure 5.14)[9]. Since then, the area has been flattened into an expanse of crushed rock, seemingly void of life and any identifiable characteristics (MacLatchy, 2020).

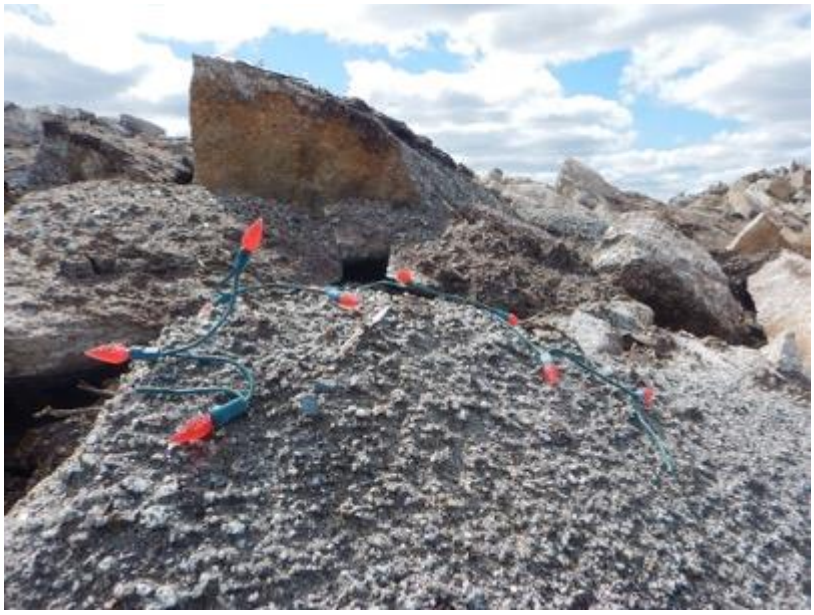

Figure 5.14: Jumbled rocks with lights. April 21, 2018 (MacLatchy, 2020, 3.2c).

5.4.3: *Small Pond*

After the 2017-2018 blasting that had obliterated the little tree and the ridge that it stood on, there was still another part of the clearcut area that had not yet been bulldozed or blasted. There were still some trails amongst the ruins, as well as some remains of wooden mountain bike ramps, boardwalks made from old wooden pallets through boggy

[9] This image is previously published in the book chapter listed below. For copyright permissions, see Appendix A (pg. 233).
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areas, bushes and plants growing up again, and a small pond. Despite the devastation all around, after the 2015 clearcut there was evidence that life was still very much present in this small pond (Figure 5.15). Ducks still swam there, and frogs still sunned themselves on rocks around the edges. Over the course of the summer that followed the cutting, the surrounding brown landscape turned green again, and although lacking trees more than a couple of feet tall, a variety of life returned and continued. The boggy area next to the pond still had thick sphagnum moss and pitcher plants and cranberries. Despite the upheaval at the top of the watershed, water still found its way into the same streams that led to the lake.

Figure 5.15: Pond a few months after the clearcut. September 2015.

Due to its close proximity to the edge of the already-built business park, I wondered about how the pond had been affected by past construction (destruction). I wondered what that landscape might have looked like and felt like only forty years earlier, prior to the construction of the Bayers Lake Industrial Park in the mid 1980s. On

the 1982 topographical map from the Halifax Municipal Archives there was an outline of what could have been the pond, but could also have been just another contour line (Interprovincial Engineering Ltd., 1982) (Figure 5.16). Perhaps the pond hadn't been a pond before drainage patterns were disrupted and changed, causing a low-lying area to flood—indeed, the presence of a few dead trees standing in the water suggested that the water level had not always been that high.

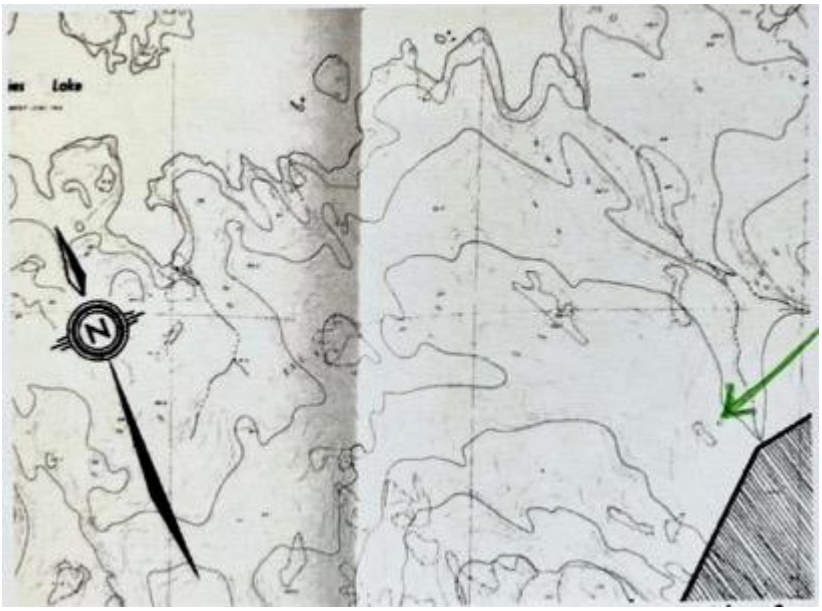

Figure 5.16: from Interprovincial Engineering Ltd., Report to Halifax Industrial Commission on Feasibility Study of the Proposed Bayers Lake Industrial Park, May 1982. Halifax Municipal Archives. Arrow added to mark location of pond.

In the spring of 2020, bulldozing and blasting came to the area of this small pond. One day, when I was sitting on bedrock by Susie's Lake about a kilometre away, I heard the airhorn warning, and with the following boom of the blast I could feel the shock of vibrations in the granite beneath me. When I eventually returned to the area of the pond months later once the activity level had settled, I found yet another unrecognizable

landscape. Just like with the previously levelled areas, the fragmented rocks resulting from the blasting of the high areas had been used to fill in the low areas. Standing in the place where the pond ought to have been, beneath my feet was jumbled and crushed granite stones and gravel (Figure 5.17). The pond had been filled in. I wondered where the ducks and frogs had gone, and surmised that, while ducks had likely flown away, frogs were probably buried there, along with the moss and pitcher plants and cranberry vines. I wandered around a bit more, and found that around the edges of the fill, in the cracks between the disheveled rocks, here and there, I could still see water.

Figure 5.17: At the coordinates of where the pond ought to have been. November 14, 2020.

5.4.4: *Small Blueberry Patch*

Nearby the pond, there was a patch of blueberry bushes that still grew, offering the gift of berries despite all of the surrounding destruction. For a couple of summers after the initial clearcutting, I had harvested some there while marveling at the plants'

insistence on living. Considering these offerings from the land as gifts (Kimmerer, 2013, 23), it seemed even more amazing that a landscape that had been treated so poorly would still be so generous. In the stage of bulldozing and blasting that began in the early summer of 2020, when the blueberry bushes were in bloom, destruction arrived in the vicinity of this place where I had picked berries before. One day I noticed that a bulldozer had already cut through one patch of blueberry bushes, leaving an edge of broken plants, crushed lichen bits, and torn roots that had pulled other plants with them, uplifting soil beside them (Figure 5.18). Kimmerer (2013) explains the need to act with reciprocity for the land (183), and, having received the gift of blueberries from these plants and noticing that they were facing impending destruction, I wondered how I could enact gratitude and reciprocity.

Figure 5.18: What remains of a patch of blueberry bushes. June 10, 2020..

Hoping that I could transplant some of them out of the path of destruction, I hiked back to my car and found a bucket and some reusable grocery bags, and decided that

these, along with my backpack, could hold plants. I hiked back out to the blueberry bushes in need of rescue, and tried to extract each plant with as many roots intact as possible. In doing this I learned how inextricably interwoven all the roots were under the surface—just under the soil was a whole world of organization and collaboration. I was disturbing this intricate network with my digging, but, by taking care to untangle the roots and break as few as possible, I aimed to counteract some of the absence of care that had ripped up their neighbouring plants with brute mechanical force. I also learned that what looked like separate plants were actually connected underground by their roots. To try to dig up one plant without breaking roots would require digging up the whole hillside of bushes together. Then I realized that to really minimize harm to the plants, I would have to not only avoid breaking roots and separating plants from each other, but I would also have to avoid separating the plants from where their roots entangled with other plant species, lichen, and the soil around them. I began trying to collect some of all of this as well, but quickly realized that I was trying to collect an entire landscape, and that it was getting dark, and that I had already collected far more than I could carry. I had to make a few trips to get it all back to the car, and by the time I was finished, it was dark and I was exhausted.

The next day many of the plants were already looking worse for wear as I more carefully potted them and gave them a bit more soil and some water. Some were slightly wilted, and many had lost their flowers amidst all the upheaval. In order to give them the best chance of survival, I planted them outside the city at a friend's place where they wouldn't be at risk of being trampled, run over, or bulldozed. I chose a spot where a few blueberry bushes already grew, hoping that meant that the conditions would be favourable to blueberry bushes (Figure 5.19).

Figure 5.19: Replanted blueberry bushes. June 14, 2020.

Back at the clearcut, bulldozing and blasting continued. Not long after, as I hiked toward the area, I noticed that leaves and the ground along the trail near the edge of the adjacent protected area were coated with a very fine dust, and there were small fragments and large chunks of freshly shattered granite scattered around, crushing bushes where they had landed (Figure 5.20). I got a bit closer, until I could see that the land from where I had collected the blueberry bushes was gone. It had been blasted, and all the rubble of mixed rock, soil, and broken plants had again been bulldozed from the high areas to fill in the low areas, adding this area to the rest of the expanse of evenly levelled lifeless ground. Where this fill had been piled deep to fill in a low area that bordered the protected area, an avalanche of jumbled rocks and soil had tumbled down to form a steep slope, bowling over trees in its path, some of which partially stuck up out of the rubble at odd angles. A trail that had formed along part of a property cut line was buried. Once

again, there was nothing left in the flattened expanse of jumble of jagged rocks to suggest the landscape that had been there so recently (Figure 5.21). I collected a few small fragments of this newly broken rock that had landed on the protected area side of the property line, and later took a piece of their home to the transplanted blueberry bushes.

Figure 5.20: Rock fragments. November 14, 2020.

Figure 5.21: Empty expanse of levelled crushed rock. June 19, 2018.

The few small pieces of broken rock that I collected were artifacts of a landscape that I once knew. Looking at the freshly cleaved surfaces of these bits of rock, as yet unaffected by erosion from air, water, and life, I inspected the clean, clear, rough crystals and wondered how processes of erosion would begin to affect them. The stories embedded in rocks, Bubandt (2017) explains, offer a reminder that change is constant, and therefore point to the multitude of potential assemblages of lifeforms and ecosystems in the future (Svenning, 2017). And, because it stretches the limits of human comprehension to consider the reach of time throughout which rocks were created and ecosystems evolved, it should also stretch our comprehension to consider what it is that we're losing when we justify the obliteration of parts of the more-than-human world for the purposes of short-term gains, usually only for a small privileged subset of humans (Bjornerud, 2018). Contemplating the unimaginable depths of time in the universe from which this small, fragile planet with an uncommon combination of hospitable conditions and the complexities of coevolution from which our current ecosystem assemblages have evolved is to try to comprehend just how unlikely, precarious, and even miraculous it is that life exists on this little planet (Albrecht, 2019).

5.4.5: *In Memory of Small Things*

Having accumulated documentation of the changes and losses in this landscape, I put together a booklet to tell the story of my witnessing the loss of each of the three: tree, pond, and blueberry bushes. The form of a booklet, something that can be easily shared but that is more tactile than a quickly buried and forgotten social media post, makes the memories of these small things into something tangible to hold onto. These booklets read somewhat like storybooks, although they are not the cheerful happy-ending sorts of

stories that a parent might want to read to a small child before bed. But they are stories that need to be shared in order to know and remember the importance of what has been and is being lost, to collaborate with human others in learning how we are response-able, and from there, enacting care toward building decolonized, reciprocal settler relationships with more-than-human kin.

The booklets chronicle my interactions with each of these three using photos, observations, dates, and coordinates in order to serve as aids to memory. As van Dooren (2014) explains, "practical acts of care … can draw others into a sense of curiosity and concern for our changing world" (293-294). Sharing stories of my interactions as I sought to make more-than-human kin in a destroyed landscape by paying attention and engaging in small acts of care was an invitation for others to join me in looking more closely at any landscape for the layers of lives and losses that aren't always immediately visible. By focusing attention on overlooked and seemingly unimportant parts of a seemingly unimportant landscape, these booklets resist allowing these losses to be made mundane through their regularity and through the blurring together of all such losses in this ecosystem together into an indistinguishable mass. With the titles "In Memory of a Small Tree/Pond/Blueberry Patch," the booklets assert the importance of remembering even specific parts of such drastically altered landscapes, and the entangled assemblages of lives within them (Figures 5.22-24). These booklets by extension show that such entities are also worth remembering and protecting in other such places.

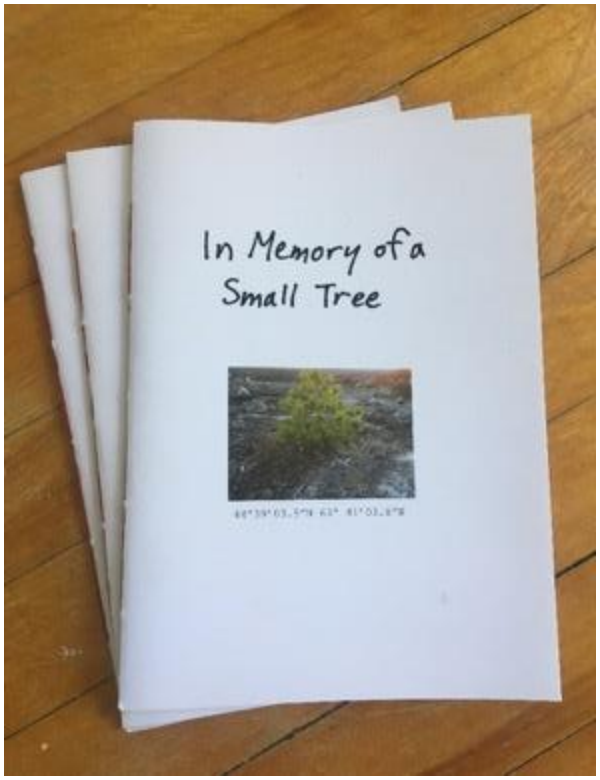

Figure 5.22: In Memory of a Small Tree. October 2018.

Figure 5.23: In Memory of a Small Pond. December 2020.

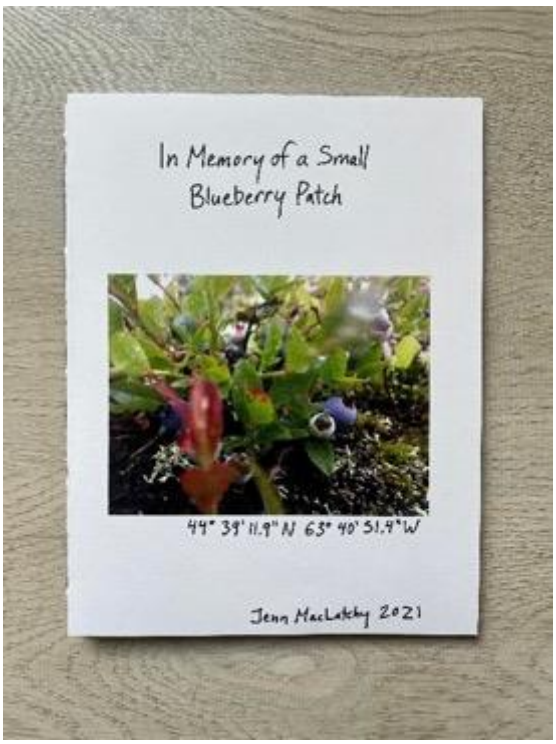

Figure 5.24: In Memory of s Small Blueberry Patch. October 2021.

5.5: Conclusion: Witnessing and Care in Damaged Landscapes[10]

van Dooren (2014) explains that "care emerges as a particularly profound engagement with the world. … To care is to … recognize an obligation to look after another, … and requires that we get involved in some concrete way" (291). While these projects did not involve trying to obstruct the clearcutting in any way, the actions that I did take, although they made no difference in the end result (other than maybe saving a few blueberry bushes), actually seemed to be the most concrete and direct thing that I could do. The learning and relationship that resulted from the experience were perhaps the most concrete action that I could have taken in that they marked what was lost as valuable, grievable, and worth remembering. The booklets are a concrete reminder of what has now been obliterated. They not only defy narratives that frame this and other such landscapes as expendable, or unworthy of attention or protection, but also offer glimpses into the sort of life-sustaining relationships and wonder that we miss out on when we don't pay attention.

For settlers on Indigenous land, listening and witnessing are the first steps toward understanding ways in which we are response-able, therefore enabling the mending and decolonizing of settler relationships with more-than-human kin. The memory of what does not survive, as well as awareness of, curiosity about, and memory of what does survive, are vital building blocks for imagining alternative worlds. That little white pine

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"did not survive, but for a while it did: long enough to bear bright red plastic lights on its tips, briefly in defiance of surrounding destruction" (MacLatchy, 2020, 57). The pond is gone, but water still finds its way through the jumbled rocks, and maybe some sorts of organisms will find their home there. The blueberry patch is gone, but there is the memory of the berries that were there, and maybe a few survivors amongst those plants that I relocated. Unable to stop the destruction, in the end I found that paying attention, and the actions that this informed—documentation, tending to memory, and enacting care--were some of the most concrete actions I could offer. In the clearcut and blasting zone, my work of "staying with" (Haraway, 2016) was in part to learn some of these ways in which I am related, interdependent, and responsible to more-than-human kin. For settlers such as myself, being responsible to, enacting care for, and making kin with more-than-human others, is the work of changing destructive relationships and coming into reciprocal community with the rest of the living world. This in turn feeds into the vital work of imagining, and then enacting, collaborative multi-species assemblages for possible livable presents and futures.

Chapter 6: Conclusion

6.1: Introduction

Given the current intersecting global crises of climate, biodiversity, and humanitarian disasters, the objective of this thesis has been to answer the question of how an arts-based practice might support responsibility to treaty and to decolonizing settler relationship with Indigenous land, therefore contributing to the vital and urgent work of creatively reimagining and building livable futures beyond and alongside capitalist colonial destruction in what has been called the Anthropocene (Bendell, 2018; brown, 2017; Davis, 2017; Demos, 2017b; Demos, 2017c; Haraway, 2016; Head, 2016; Rose, 2017; Tsing, 2015). Through a practice of arts-based methods and creative inquiry I sought to learn how to be responsible to more-than-human kin (Haraway, 2015; Haraway, 2016). This involved reflexivity on how my position as a settler on unceded Indigenous land (Hurley & Jackson, 2020), and as a participant in and beneficiary of the capitalist colonial system of exploitation and destruction of the living world, affects my relationship with those more-than-human others whom I seek to be able to call kin. Tensions arise from the fact of my participation in and benefitting from the very systems that have caused the need for formerly-lively landscapes to be bulldozed to make way for stores and roads and industry (Demos, 2017a). There are tensions between my benefitting from centuries of colonial practices of destructive resource extraction in Mi'kma'ki (Palmater, 2016) and my aim to mend some of this damage, and between my inherited ease of access to land that supported my ability to carry out this project and my intentions of unsettling settler belonging (Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020). These

tensions were generative places for questioning how things could be different (Demos, 2016; Puig de la Bellacasa, 2017).

Toward these aims, I engaged in a practice of relating to land and more-than-human kin by attending to sites in which my own settler colonial capitalist society has had a disruptive and destructive impact—more specifically, marine debris plastics, invasive knotweed, waste paper, and a former forest turned blasting zone. I began, in the first chapter, by describing the current state of ecological crises, and the interconnected capitalist and colonial systems that are responsible for the destruction and unravelling of the web of the living world (Bendell, 2018; Davis, 2017; Demos, 2017a; Gan et al., 2017; Haraway, 2016; Rose, 2017; Tsing, 2015). Part of this practice was learning ways in which I might not have to be dependent on this destructive system, instead able to rely on community in the web of the living world (Simpson, 2014). Within the generative space of these tensions, I developed specific projects that worked toward decolonizing my own settler land-based practice in Mi'kma'ki. In the second chapter I discussed my arts-based methodology in a practice of research-creation. I describe how, through an emergent creative land-based practice (Hesse-Biber & Leavy, 2008), I have responded to widespread calls for all creative energies to confront urgent ecological crises by focusing on imagining and creating alternative worlds that could lead instead toward possible futures for diverse multi-species survival and thriving (Bostic & Howey, 2017; Davis, 2017; Demos, 2016; Demos, 2017b, Demos, 2017c; Haraway, 2016; Kirksey et al., 2013; McKibben, 2005; Solnit, 2004). I then elaborated in the following three chapters on three different and interconnected projects that emerged from this practice: working with plastic waste, invasive plant species, and in a devastated and blasted landscape. These are all ways of "staying with the trouble" (Haraway, 2016) of the current moment, with the

aim of tending to and mending the relationships that form the web of the living world, through small acts of care (Conley, 2016; Haraway, 2016; Puig de la Bellacasa, 2017; Rose, 2013).

All of this work aims to respond directly to the challenges of the present moment; one defined by the unfolding crises of climate chaos and mass extinction, which have been caused by excessive carbon emissions and destructive exploitation of the living world (Bendell, 2018; Bjornerud, 2018; Challenger, 2012; Cribb, 2019; Davis, 2017; Demos, 2017c; Gan et al., 2017; Kirksey et al., 2013; Lee, 2016; Parikka, 2015; Rose, 2013; Rose, 2017; Solnit, 2004; Tsing, 2015; Vince, 2020). As the fabric of life that supports human survival continues to unravel, the future appears uncertain and precarious. This current time of unravelling, sometimes called the Anthropocene (Adams, 2021; Davis & Todd, 2017; Davis & Turpin, 2015; Demos, 2017a; Haraway, 2015; Haraway, 2016), is shaped by the capitalist pursuit of endless growth and colonial entitlement to land, and cannot continue on a finite planet (Bendell, 2018). The human exceptionalism (Davis, 2017; Haraway, 2016; Rose, 2017; Shotwell, 2016; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020) embedded in the colonial concept of land ownership and the capitalist system that treats the living world as inanimate has severed relationships between many humans and the rest of the community of the living world (Albrecht, 2019; Challenger, 2012; Demos, 2017a; Gan et al., 2017; Tsing, 2015; Watts, 2013).

In contrast with unsustainable human exceptionalism, destruction, and exploitation, many Indigenous peoples have lived and continue to live in reciprocal relationship with more-than-human community, rooted in millennia of land-based knowledge and skills (Coulthard, 2014; Jardine, 2019; Kimmerer, 2013; Lee, 2016;

McMillan & Prosper, 2016; M'sit No'kmaq et al., 2021; Simpson, 2014; Simpson, 2017; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020; TallBear, 2017; Young, 2016). In Mi'kma'ki, the Peace and Friendship Treaties, by outlining what was to be a respectful and peaceful nation-to-nation relationship between European settlers and the Mi'kmaq (Battiste, 2016; Palmater, 2016), invited settlers to live in Mi'kma'ki in a way that would avoid interference in these long-established life-supporting relationships of multi-species community (Battiste, 2016; McMillan & Prosper, 2016; Palmater, 2016; Prosper et al., 2011). But these treaties were and continue to be violated in a multitude of ways, and Mi'kmaw land-based knowledge, skills, and relationships with more-than-human relatives have been and continue to be under attack (McMillan & Prosper, 2016; M'sit No'kmaq et al., 2021; Palmater, 2016; Pictou, 2019; Prosper et al., 2011). Treaty violations in Mi'kma'ki are just one piece of the global capitalist colonial system that is the cause of current climate and biodiversity crises (M'sit No'kmaq et al., 2021; Pictou, 2019; Prosper et al., 2011). Therefore, working toward living in accordance with treaty obligations offers one way of addressing this great unravelling and tending to alternatives that might lead to possible survivable futures (Coulthard, 2014; M'sit No'kmaq et al., 2021; Pictou, 2019; Sundberg, 2014). I addressed this through an ongoing and emergent arts-based research practice (Hesse-Biber & Leavy, 2008) that explored how to develop a decolonial settler land-based treaty practice (Land, 2011; Sundberg, 2014) in order to be responsible to treaty, to more-than-human kin, and to find ways of living ethically that tend to possible livable futures beyond the Anthropocene (Bjornerud, 2018; Davis, 2017; Demos, 2017c; Gan et al., 2017; Haraway, 2016; Head, 2016; Myers, 2017a; Puig de la Bellacasa, 2017; Rose, 2017; Svenning, 2017; Tsing, 2015).

In the second chapter, I describe how this research emerged from an arts-based creative practice, informed by commitments to exploring tensions inherent in being a settler human who is entangled in and dependent upon the capitalist and colonial structures that are the cause of present Anthropocene crises (Demos, 2017a). The specific questions and the directions that this work followed arose from an emergent practice of research-creation that responded to the materials and relationships that I observed in the world around me (Truman et al., 2019). I specifically paid attention to material waste that was abundant in my daily life, and by intentionally cultivating the skills of noticing this waste, I discovered how easy it is to see waste without actually really noticing it or registering its out-of-place-ness or accumulation. As Demos (2017c) asserts, the arts are "materializing and performing ongoing cultural mutations and … are enacting the very rupture most needed within our petrocapitalist complex" (n.p.). As a part of this mutation, my embodied art practice is a method of inquiry and research-creation that probes questions of how to be responsible to more-than-human kin amidst destruction and is capable of enacting the changes and ruptures that are most needed in the current system (Davis, 2017; Demos, 2017c; Giraud & Soulard, 2015).

By looking to land-based Indigenous knowledges and cosmologies, I sought to decolonize my own settler relationship with land and unlearn the settler colonial perspectives that view the more-than-human living world as other, or as inanimate. Living and working in Mi'kma'ki, I specifically looked to learn from Mi'kmaw concepts of M'sit No'kmaq (Doucette & Hache, 2021; Hurley & Jackson, 2020; Marshall, 2020; M'sit No'kmaq et al., 2021) and Netukulimk (Doucette & Hache, 2021; Marshall, 2020; McMillan & Prosper, 2016; M'sit No'kmaq et al., 2021; Prosper et al., 2011; Robinson, 2014; Young, 2016), and from the land itself. These concepts are not mine to claim or

appropriate, but can offer guidance about settler responsibility to land in Mi'kma'ki. Cultivating attentiveness, learning from, and tending to more-than-human kin in Mi'kma'ki forms a practice of being responsible to treaty by working toward reciprocal relationships that support and do not inhibit the life-supporting relationships that form the web of life.

In chapters three through five, I have described three separate but interconnected projects that respond to environmental calls for creative reimagining (Bostic & Howey, 2017; Conley, 2016; Davis, 2017; Demos, 2016; Demos, 2017c; Haraway, 2016; Kirksey et al., 2013; McKibben, 2005; Ricou, 2014)—"Ocean Treasures," "Weeds and Invasion," and "In Memory of Small Things." Through the cultivation of land-based knowledge, skills, and relationships, and attentive to current conditions and uncertain and precarious futures, these projects all sought to explore material responsibilities amidst capitalist waste and colonial ruins (Tsing, 2015). They did this by experimenting with different ways of offering care for waste, weeds, and small, seemingly insignificant and neglected things (Duclos & Criado, 2019; Lee, 2016; Puig de la Bellacasa, 2017; Rose, 2017; van Dooren, 2014) in order to that tend to multi-species entanglements that might support and build habitable worlds beyond the so-called Anthropocene (Adams, 2021; Davis & Todd, 2017; Haraway, 2015; Haraway, 2016; Mirzoeff, 2018; Myers, 2017a; Parikka, 2015; Yusoff, 2018).

6.2: Ocean Treasures

Chapter three chronicles my adventures in collecting plastic marine debris artifacts. While kayaking and walking along shorelines, I found and collected all kinds of mostly-plastic waste, and kept records of what I found. I began collecting marine debris

with the aim of trying to gain some understanding of the scale of the problem of marine debris, and the potential role of individual actions. But what I found was that it is futile to grapple with comprehending the scale of the problem. Rather than scale, this project presented an opportunity to learn from plastic marine debris items as artifacts that bear stories about entanglements of consumerism and capitalist exploitation with the living world (Humes, 2012; Strasser, 1999; Thill, 2015). The objects that I collected bore stories about interactions between plastics and sea animals in bite marks (Liboiron, 2015; Thill, 2015), ocean currents and winds and waves and waste disposal habits in the patterns of what types of items I commonly found and where I found them (Ebbesmeyer & Scigliano, 2009), and interactions with light and water and abrasion in finding similar objects in various stages of photodegradation and disintegration into microplastics (Gray-Cosgrove et al., 2015; Liboiron, 2015; Thill, 2015). Consistent with the findings of others, I observed evidence that, while some plastic marine debris is intentionally discarded in the ocean, much of the plastic in the water and on shorelines had most likely escaped from waste collection systems or was released by accident or carelessness (Borelle et al., 2020; Jambeck et al., 2015; Law, 2017b). Plastic's resistance to containment, capture, and control highlighted the absurdity of the idea that something non-decomposable could be considered disposable (Alaimo, 2016; Robson, 2012; Thill, 2015). All of these plastic artifacts highlighted the delusion of human exceptionalism and the idea that humans could cause so much destruction in the life-supporting web of the living world without consequence. As it moves through ecosystems, becoming part of land, water, air, and creatures' bodies, plastic pollution confronts us with the irony of the idea that plastic could form impermeable barriers against the messiness of the living world (Liboiron, 2015; Thill, 2015). It exposes the preposterousness of human

exceptionalism by presenting undeniable evidence of the deep and inextricable interconnectivity of the living world, and the consequences of our forgetting this.

Understanding waste—both in its "proper" place in a landfill and in its escaped form—as a form of colonialism (Liboiron, 2017; Liboiron, 2018b), I turned to this material as a way of addressing some of the deep traces and harms that settler colonial society has caused. Understood as the externalities of the production of commodities, waste is what is left over when desire for the material is gone (Thill, 2015). This waste material is sent "away," to somewhere out of sight and out of mind—whether that be a landfill, the ocean, or the spaces of somebody else's daily life—which requires space, and land (Liboiron, 2015). By collecting some of this plastic marine debris waste from shorelines, I sought to reduce some of its colonizing power and enact responsibility for this material, which I am in some ways complicit in creating because I too use and dispose of plastics in ineffective waste management systems. By exploring ways to reinscribe plastic waste with value and desire and thus transform it from waste into not-waste (Robson, 2012), I worked to shift the material relationship with plastic waste as a way to be responsible to this material and its colonial externalities (Thill, 2015). I did this by honouring, "elevating," and working with its material characteristics of plasticity, different colours, textures, and light-capturing qualities (Robson, 2012). This was a repositioning that moved it from dirty, toxic, and harmful waste into something beautiful or useful, or supportive rather than destructive of life. An inextricable part of land and an insistent and abundant presence in any ecosystem (Liboiron, 2015), plastic waste is a material that is and will continue to be present and therefore must be accounted for in visions for possible futures. This project described in chapter 3 explored potential ways to

work with this unavoidable material to change our relationship with plastic from that of adversary to that of collaborator in building livable futures.

6.3: Knotweed

From understanding the plastic waste infiltrating almost every ecosystem as form of colonial invasion, I then turned to a different kind of invasiveness. I chronicled my work with knotweed (chapter 4), which, having been introduced to Turtle Island by settlers, is widespread in Mi'kma'ki, and in Ktaqmkuk (Newfoundland) (Cottet et al., 2020; Parkinson & Mangold, 2010), where I conducted much of this project. Rather than attempting to eradicate knotweed by any means necessary, including the usual method of applying potentially harmful chemical herbicides such as glyphosate (Jollimore, 2021), I sought to performatively shift relationships with knotweed by looking for what potential gifts it might have to offer as a fellow "settler" in this land (Kimmerer, 2013). By harvesting some of this highly invasive and abundant plant, I hoped to both mitigate some of the harm that it is causing to indigenous plant species by ever-so-slightly reducing its volume, and at the same time I hoped to discover uses for this plant that might then be able to lessen reliance on other parts of the living world that are over-exploited as resources. I first tried to make cord from knotweed, envisioning that I would then be able to use resulting knotweed cord to perform gestures of weaving and mending on disturbed and damaged land, but knotweed resisted my efforts to make it into cord. I then tried to use it to make paper, but again was not successful. This project did not turn out as I'd envisioned, but, as with my work with plastic waste, from learning to pay attention to material agency (Alaimo, 2016; Bennett, 2010; Chen, 2012) I discovered something different from what I'd set out to learn. I was hoping to find creative material uses for

knotweed, but I was still thinking of it as a resource, rather than as a potential collaborator (Haraway, 2016; Head, 2016), and was therefore still looking for ways to make knotweed behave how I wanted it to, rather than looking to learn what strengths it already had.

This work responded to calls such as Robin Wall Kimmerer's (2013) appeal for settlers to behave more like plantain—a plant introduced to Turtle Island, but integrated into its new ecosystem home, not invasive—than like kudzu, another invasive plant in other parts of Turtle Island (214). It also responded to Kimmerer's (2013) outline of the "honourable harvest;" guidelines compiled from similarities in harvesting practices across various Indigenous nations on Turtle Island (180). These principles include gratitude, learning how to take care of those who care for us, and acting with reciprocity (Kimmerer, 2013, 180), and resonate with the Mi'kmaw principle of Netukulimk (Doucette & Hache, 2021; Marshall, 2020; McMillan & Prosper, 2016; M'sit No'kmaq et al., 2021; Prosper et al., 2011; Robinson, 2014; Young, 2016). By engaging with knotweed, I sought to make my own settler relationship with land less invasive by working to address the invasiveness of the plant. Where knotweed had taken over an area, I questioned my own sense of entitlement to being where I was before harvesting (Liboiron, 2018b). I took care as I transported it to avoid dropping pieces that could contribute to its spreading. Where knotweed had colonized an area of land, by harvesting with curiosity and care for the other beings who might have lived or still live there I offered gestures of reciprocity to the land that had provided this material. By treading carefully, only harvesting what I needed and could safely contain while transporting, and by focusing my harvesting activities on this particularly overabundant plant, I worked toward developing a settler practice of honourable harvest (Kimmerer, 2013, 180). While knotweed didn't lend itself to forming the sorts of materials I'd hope to make, I learned

other things about the plant, such as its ability to break through pavement and bring life to places that seem otherwise entirely inhospitable, and about the need to investigate and work with material agency. As Lesley Head (2016) argues, "weeds may be more useful companions on the Anthropocene journey than we can yet imagine" (117). With such pavement-busting abilities and the willingness to grow just about anywhere where others cannot, it seems that knotweed might indeed be a useful collaborator in revegetating areas that have been made inhospitable to others, and in surviving when other plant relatives have gone extinct.

6.4: In Memory of Small Things

In the fifth chapter, I chronicled my explorations, observations, and responses in a forest-turned-construction-zone. Ongoing over the course of a few years, this work responded to calls for attentiveness and action toward the current state of crises (Bjornerud, 2018; Challenger, 2012; Davis, 2017; Demos, 2017c; Gan et al., 2017; Gillespie, 2016; Haraway, 2016; Kettleborough, 2019; McKibben, 2005; Ricou, 2014; Svenning, 2017; Tsing, 2015), by observing, following, and documenting the changes in a landscape I had once known as forest with rambling trails as it transformed into a clearcut, and then blasting zone, followed by flat expanse of crushed rock. I described how, rather than turning away from this scene of destruction, my practice of paying attention to what was being irrevocably lost was a way of attending to the even greater and far more incomprehensible losses that are happening in the midst of a global mass extinction (Bendell, 2018; Challenger, 2012; Cribb, 2019; Gan et al., 2017; Kettleborough, 2019; Kolbert, 2014; Rose, 2013; Rose, 2017; Vince, 2020). By observing the many stages in the process of transformation in this landscape, I was able to recognize

where the “ghosts” of past multi-species entanglements were present as they were then rolled into and buried under the new landscape (Bubandt, 2017; Gan et al., 2017; Matthews, 2017; Svenning, 2017). In resistance to shifting baseline syndrome (Bjornerud, 2018; Bubandt, 2017; Matthews, 2017; Papworth et al., 2008; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020), recognizing “ghosts” in this landscape was a way of, by extension, learning to see layers of previous landscapes that I had never known, that had been erased or obliterated (Gan et al., 2017; Matthews, 2017; Svenning, 2017).

Paying attention, remembering, and resisting shifting baseline syndrome were an assertion that what was being lost mattered (Butler, 2004; Gillespie; Lee, 2016). As I wondered what I could actually do in this landscape to enact some sort of life- and future-tending care, it seemed that bearing witness and paying attention were among the most concrete things I could do (Gillespie, 2016; Kettleborough, 2019). Rather than lobbying or protesting—which too are important ways of enacting care for more-than-human kin—I stayed present, paid attention, and collected field notes to document the transformation. I documented performing small gestures of care towards three particular entities within this blasted landscape—a tiny white pine tree, a small trashy pond, and some scraggly blueberry bushes—and produced three small booklets to tell the stories of each. These stories chronicled my search for creative ways to enact care for more-than-human relatives, and my finding that sometimes witnessing and remembering are some of the most concrete acts of care. In a settler practice of learning from M’sit No’kmaq (Doucette & Hache, 2021; Hurley & Jackson, 2020; Marshall, 2020; M’sit No’kmaq et al., 2021), I sought to first learn about the multitude of more-than-human living beings in this landscape that was undergoing destruction, and then to learn how I am related to and therefore responsible to these kin (Haraway, 2015; Haraway, 2016). This was a practice

of unlearning the colonial mindset of human exceptionalism, and through reflexive consideration of how my own white privilege and settler identity shaped my interactions in this space (Hurley & Jackson, 2020), it became part of my work of trying to decolonize my own settler relationship with land in Mi'kma'ki. This method of enacting care in disturbed landscapes formed part of an ongoing settler treaty practice of being responsible to more-than-human kin. And by asserting that these small things mattered, this practice of witnessing and offering care toward waste, weeds, and in sites of destruction (Duclos & Criado, 2019; Gillespie, 2016; Kettleborough, 2019; Lee, 2016; Puig de la Bellacasa, 2017; Rose, 2017; van Dooren, 2014) worked toward making the necessary ruptures in the capitalist system (Demos, 2017c) that reduces living beings and whole communities of ecosystems to being measured only in dollar values.

6.5: Practice & Process

The works described in this thesis were part of an arts-based practice of research-creation aimed at developing a decolonial settler method for land-based work that tends to building livable futures (Bostic & Howey, 2017; Davis, 2017; Demos, 2016; Demos, 2017b, Demos, 2017c; Gan et al., 2017; Haraway, 2016; Head, 2016; Kirksey et al., 2013; McKibben, 2005; Myers, 2017a; Puig de la Bellacasa, 2017; Ricou, 2014; Solnit, 2004). This thesis addressed the questions about how to come into reciprocal relationship with more-than-human kin through concrete acts of care (Conley, 2016; Haraway, 2016; Kimmerer, 2013; Puig de la Bellacasa, 2017; Rose, 2013) and thus move toward viable futures, even when it seems futile amidst such overwhelming cascades of extinction and destruction (Lee, 2016; McKibben, 2005; Rose, 2013; Vince, 2020). This question is not the sort that can be resolved with any simple or clear-cut final answers; rather, it is multi-

faceted and requires an ongoing practice of curiosity, paying attention, learning and unlearning, collaboration, creativity and adaptation, and critically engaged care (Haraway, 2016). Within these larger, broader questions, the three projects described herein have attempted to answer more specific questions in response to my surrounding environment.

This ongoing and evolving practice is but one example of what a decolonial settler arts-based treaty practice might look like. As with most other arts-based research, the goals and research questions shift and evolve as long as the work is ongoing (Haseman, 2009). Within the scope of this thesis work, my research question shifted from wondering how an individual can make a difference, to instead questioning how to decolonize relationship with more-than-human kin. The projects described herein contribute to the field of scholarship that calls for all creative energies to be directed toward the critical work of reimagining vibrant and habitable alternative worlds to the destruction of the one we are living in (Bjornerud, 2018; Bostic & Howey, 2017; brown, 2017; Davis, 2017; Demos, 2016; Demos, 2017b, Demos, 2017c; Gan et al., 2017; Haraway, 2016; Head, 2016; Kirksey et al., 2013; McKibben, 2005; Myers, 2017a; Puig de la Bellacasa, 2017; Rose, 2017; Ricou, 2014; Solnit, 2004; Tsing, 2015). For those of us raised and steeped in capitalist culture, and whose knowledge is built on a foundation of the devastating delusion of human exceptionalism (Davis, 2017; Haraway, 2016; Rose, 2017; Shotwell, 2016; Sinopoulos-Lloyd & Sinopoulos-Lloyd, 2020), this requires ongoing decolonial unlearning and re-learning how to relate with more-than-human others as relatives and as vibrant and lively actors rather than as lifeless materials available for exploitation without consequence (Alaimo, 2016; Bennett, 2010; Chen, 2012; Robinson, 2014; TallBear, 2017). These three projects form part of a practice of creative engagement with the more-

than-human world aimed at better tending to more-than-human kin and finding creative ways to mend tears in the web of the living world to resist and slow its unravelling (Demos, 2017c). By tending to relationship, this practice does both the critical work of reimagining and the concrete work of putting this into practice by engaging with and tending to the relationships that form the fabric of the living world.

My work with marine debris offers one answer to the question of how to collaborate with plastics toward building habitable futures, but, given the abundance of wayward plastics, many, many more answers are needed. Just as researchers can learn much about people from their trash, marine debris is an artifact that offers abundant information about the process of its creation, the human habits of its consumption and disposal, and its ongoing activities after it has been discarded (Alaimo, 2016; Humes, 2012; Strasser, 1999; Thill, 2015). Further research could work towards figuring out how this information might translate into broader change in how plastics are conceptualized and used. And, while my work with marine plastics considered microplastics for what they tell of interconnectedness, it did not begin to address the toxicity of microplastics that will be present in any futures, livable or not. Meanwhile, my research with knotweed was inconclusive, and there are ample other invasive species with whom we might work toward survivable futures. More research might find uses for knotweed that might, as I had initially hoped, help lessen the demands put on forests for tree pulp. More importantly, further work with invasive species might help reframe relationships away from viewing them as adversaries, or even resources, toward instead thinking of and relating with them as collaborators (Head, 2016; Kimmerer, 2013; Lee, 2016). And, in the particular clearcut and blasting zone in which I carried out my third project, there are endless more opportunities for acts of care, and, as the landscape quickly evolves, more

changes to track. Beyond this particular landscape more work with waste and in wastelands is increasingly needed as volumes of waste and expanses of wastelands continue to grow.

The work of contributing to the enormous task of world-making for future survival and thriving beyond current systems of destruction necessarily continues far beyond what is contained in this thesis, and will certainly shift and evolve just as it did in the three projects described herein. The broader research questions about how arts-based methods might contribute to livable futures inevitably require further exploration through ongoing practice. Because the task of building possible futures is so great, it requires nothing less than a multitude of diverse and creative responses from all angles (Davis, 2017; Demos, 2017c; Haraway, 2016; Ricou, 2014). And because this task is so enormous, it is necessarily ongoing.

6.6: Material Responsibility

Even before I began working with knotweed in a way that eventually led me to working with recycled paper, I had been saving all of the paper that I used in the process of this PhD program. I didn't start saving it at the beginning, so I won't arrive at any definitive measurements of how much paper was used, but, since I started saving it in 2017, I have accumulated enough to give me an idea that there are massive volumes of paper that, much like plastics, pass through my hands without me registering much about their accumulation. I have perhaps used more paper than I could have had I not printed out drafts to edit with pen and paper before making changes digitally. But I took actions to try to diminish my consumption of paper for this purpose: I saved every only-used-on-one-side piece of paper that I came across, and scavenged more such paper that had been

discarded by others in campus recycling bins. As a result of this, the total volume of used paper that I collected is a lot more than what it would have been had I started only with new and unused paper. While I did not keep track of how much new vs. used paper that I used, I am certain that a significant majority was the latter. Aware of the contradictions embedded in consuming copious amounts of paper to do this work of tending to the damaged landscapes and ecosystems from which such "resources" are extracted, the intention behind this practice of saving fully used paper was to find ways to enact responsibility to this material (Alaimo, 2016; Humes, 2012; Robson, 2012) in order to, by extension, also be responsible to the ecosystems and living beings that provided it.

I first used some of this paper to make small non-sensical booklets, composed of half-pages sewn together using plastic threads extracted from marine debris rope, resulting in fragments of sentences and scribbles mixed with the other completely unrelated things that were already printed on one side of the scavenged paper. After accruing plenty of these nonsensical little books as well as one three-inch-thick book of the same (Figure 6.1), I began to think about what I could make from recycling the rest of the accumulated paper into new handmade paper. I recycled some of the used paper into handmade paper, and then used some of this to make a booklet that chronicled some of the struggles that resulted from doing this work during the onset of the global Covid-19 pandemic. More of this recycled paper, reflecting the material it is made of, is in the process of becoming a remixed dissertation booklet. But still, I have accumulated more

used paper than I yet know what to do with. What the rest will become is yet unknown and is one thread within this work that is ongoing.

Figure 6.1: useless book made from used paper. November 2018.

I have also revisited and continued to work with knotweed. I have found that, using younger and more tender shoots, I could extract workable fibres from the stalks by scraping the rest of the skin and pith away with a butter knife. I was able to twist the resulting fibres into cord and weave a bracelet from a simple Turk's head knot (Figure 6.2). It was much more labour-intensive to produce this cordage than to make a similar length of cord from day lily leaves, and it has yet to be seen how long this fibre will hold together. But the research is ongoing, and, as such emergent practices are (Haseman, 2009), it likely always will be.

Figure 6.2: knotweed fibres (top), and day lily leaves (bottom). July 2022.

6.7: Conclusion: A Land-Based Settler Practice for Building Decolonial Livable Futures

In this thesis I have described how, through an arts-based practice of research-creation, I responded to calls for creative energies to be directed toward imagining and building livable futures beyond the Anthropocene (Bostic & Howey, 2017; Davis, 2017; Demos, 2016; Demos, 2017b, Demos, 2017c; Haraway, 2016; Kirksey et al., 2013; McKibben, 2005; Ricou, 2014; Solnit, 2004) and beyond the capitalist colonial system that is accelerating the destruction of the living world (Bendell, 2018; Davis, 2017; Demos, 2017a; Gan et al., 2017; Haraway, 2016; Rose, 2017; Tsing, 2015). As Myers (2018) argues, "the only way to thwart the momentum of the Anthropocene is to break capitalism and activate processes of decolonization […] there is no need to wait until the end of this world to begin to conjure livable ones" (54). I have outlined three

interconnected projects that contribute to this vital and ongoing work by exploring and developing a settler decolonial method for land-based practice. The projects do this by paying attention and witnessing in order to learn about the entangled relationships that compose the web of the living world, and learn how and where these have been affected by the deep traces and ongoing impacts of colonialism (Bubandt, 2017; Gan et al., 2017; Gillespie; Haraway, 2016; Kettleborough; Matthews, 2017; Sinopoulos-Lloyd & Sinopoulos-Lloyd , 2020; Tsing, 2015). By learning from land and from Mi'kmaw traditional knowledges (Doucette & Hache, 2021; Hurley & Jackson, 2020; Marshall, 2020; McMillan & Prosper, 2016; M'sit No'kmaq et al., 2021; Prosper et al., 2011; Robinson, 2014; Young, 2016), these projects worked toward developing decolonial settler relationship with land and more-than-human kin as a way of being responsible to these kin and to treaty in Mi'kma'ki (Battiste, 2016; Palmater, 2016). By enacting gestures of care towards waste, weeds, and destroyed landscapes, these projects contribute to a creative reimagining that puts into practice the work of tending to and mending relationships that form the web of the living world.

It can often be difficult to find hope for the future given the current trajectory of unfolding climate, biodiversity, and humanitarian crises, including the impact of expanding volumes of wastes, aggressive invasives, and wastelands (Head, 2016; Lee, 2016; McKibben, 2005). Plastic waste continues to enter the ocean and wreak havoc on ecosystems (Jambeck et al., 2015; Law, 2017b; Liboiron, 2015), knotweed and other invasives continue to outcompete native species, and deforestation continues to destroy vibrant ecosystems (Bendell, 2018; Demos, 2017a; Tsing, 2015). But, as Lee (2016) explains, grief is a part of hope. "It's hard to distinguish between mourning and hope […] except that mourning is about knowing there have existed creatures here worth saving

who could not be saved" (n.p.). Recognizing losses and remembering what and who has been lost asserts that they matter (Ahmed, 2004; Butler, 2004; Gillespie, 2016), and knowing what matters guides us in where to direct care in the work of mending and tending to the multiple reciprocal relationships that form the fabric of the living world, including all peoples. There is no undoing of all the irrevocable damages and losses that have already occurred, and the unfolding cascades of climate and humanitarian crises and extinctions at this point may be unstoppable (Bendell, 2018; Cribb, 2019). Built from the material of the rubble and refuse and weeds and wastelands of the current world (Tsing, 2015), whatever future worlds are to come will necessarily be different from any past worlds. The projects described herein are acts of tending to hope for livable futures. They form part of an ongoing practice of working with waste, weeds, and wastelands as collaborators towards forming decolonial settler relationship with more-than-human kin in Mi'kma'ki for the flourishing of life-supporting multi-species community.

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Appendix A: License Agreement (images)

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Order License ID	1315830-1		
ISBN-13	9780429275821	Publisher	Taylor and Francis
		Portion	Image/photo/illustration

LICENSED CONTENT

Publication Title	Fieldnotes in Qualitative Education and Social Science Research : Approaches, Practices, and Ethical Considerations	Rightsholder	Taylor & Francis Group LLC - Books
		Publication Type	e-Book
		Start Page	46
Article Title	Fieldnotes in marginal landscapes: Toward an Anthropocene ethic of care	End Page	60
Date	04/08/2020		
Language	English		

REQUEST DETAILS

Portion Type	Image/photo/illustration	Distribution	Canada
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NEW WORK DETAILS

Title	Small Acts of Care Toward Waste, Weeds, and Wastelands: An Arts-Based Method for Decolonizing Settler Relationship with Land and Tending to Livable Futures	Institution Name	Dalhousie University
		Expected Presentation Date	2023-03-15
Instructor Name	Jennifer MacLatchy		

ADDITIONAL DETAILS

Order Reference Number	N/A	The Requesting Person/Organization to Appear on the License	Jennifer MacLatchy, Dalhousie University

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Title, Description or Numeric Reference of the Portion(s)	I would like to reuse three images: the third in Figure 3.1 on pg.53, and the first and third in Figure 3.2 on pg. 56	Title of the Article/Chapter the Portion Is From	Fieldnotes in marginal landscapes: Toward an Anthropocene ethic of care
		Author of Portion(s)	MacLatchy, Jennifer
Editor of Portion(s)	MacLatchy, Jennifer	Issue, if Republishing an Article From a Serial	N/A
Volume of Serial or Monograph	N/A		
		Publication Date of Portion	2020-04-09
Page or Page Range of Portion	53, 56		

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C) use is limited to no more than the greater of (a) 25% of the text of an issue of a journal or other periodical or (b) two articles from such an issue;

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C) use is limited to not more than the greater of (a) 25% of the text of an issue of a journal or other periodical or (b) two articles from such an issue;

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		Publication Type	e-Book
		Start Page	46
Article Title	Fieldnotes in marginal landscapes: Toward an Anthropocene ethic of care	End Page	60
Date	04/08/2020		
Language	English		

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NEW WORK DETAILS

Title	Small Acts of Care Toward Waste, Weeds, and Wastelands: An Arts-Based Method for Decolonizing Settler Relationship with Land and Tending to Livable Futures	Institution Name	Dalhousie University
		Expected Presentation Date	2023-03-15
Instructor Name	Jennifer MacLatchy		

ADDITIONAL DETAILS

Order Reference Number	N/A	The Requesting Person/Organization to Appear on the License	Jennifer MacLatchy

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		Author of Portion(s)	MacLatchy, Jennifer
		Issue, if Republishing an Article From a Serial	N/A
Editor of Portion(s)	MacLatchy, Jennifer		
Volume of Serial or Monograph	N/A	Publication Date of Portion	2020-04-09
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Marketplace Order General Terms and Conditions

The following terms and conditions ("General Terms"), together with any applicable Publisher Terms and Conditions, govern User's use of Works pursuant to the Licenses granted by Copyright Clearance Center, Inc. ("CCC") on behalf of the applicable Rightsholders of such Works through CCC's applicable Marketplace transactional licensing services (each, a "Service").

1) **Definitions.** For purposes of these General Terms, the following definitions apply:

"License" is the licensed use the User obtains via the Marketplace platform in a particular licensing transaction, as set forth in the Order Confirmation.

"Order Confirmation" is the confirmation CCC provides to the User at the conclusion of each Marketplace transaction. "Order Confirmation Terms" are additional terms set forth on specific Order Confirmations not set forth in the General Terms that can include terms applicable to a particular CCC transactional licensing service and/or any Rightsholder-specific terms.

"Rightsholder(s)" are the holders of copyright rights in the Works for which a User obtains licenses via the Marketplace platform, which are displayed on specific Order Confirmations.

"Terms" means the terms and conditions set forth in these General Terms and any additional Order Confirmation Terms collectively.

"User" or "you" is the person or entity making the use granted under the relevant License. Where the person accepting the Terms on behalf of a User is a freelancer or other third party who the User authorized to accept the General Terms on the

User's behalf, such person shall be deemed jointly a User for purposes of such Terms.

"Work(s)" are the copyright protected works described in relevant Order Confirmations.

2) **Description of Service.** CCC's Marketplace enables Users to obtain Licenses to use one or more Works in accordance with all relevant Terms. CCC grants Licenses as an agent on behalf of the copyright rightsholder identified in the relevant Order Confirmation.

3) **Applicability of Terms.** The Terms govern User's use of Works in connection with the relevant License. In the event of any conflict between General Terms and Order Confirmation Terms, the latter shall govern. User acknowledges that Rightsholders have complete discretion whether to grant any permission, and whether to place any limitations on any grant, and that CCC has no right to supersede or to modify any such discretionary act by a Rightsholder.

4) **Representations; Acceptance.** By using the Service, User represents and warrants that User has been duly authorized by the User to accept, and hereby does accept, all Terms.

5) **Scope of License; Limitations and Obligations.** All Works and all rights therein, including copyright rights, remain the sole and exclusive property of the Rightsholder. The License provides only those rights expressly set forth in the terms and conveys no other rights in any Works

6) **General Payment Terms.** User may pay at time of checkout by credit card or choose to be invoiced. If the User chooses to be invoiced, the User shall: (i) remit payments in the manner identified on specific invoices, (ii) unless otherwise specifically stated in an Order Confirmation or separate written agreement, Users shall remit payments upon receipt of the relevant invoice from CCC, either by delivery or notification of availability of the invoice via the Marketplace platform, and (iii) if the User does not pay the invoice within 30 days of receipt, the User may incur a service charge of 1.5% per month or the maximum rate allowed by applicable law, whichever is less. While User may exercise the rights in the License immediately upon receiving the Order Confirmation, the License is automatically revoked and is null and void, as if it had never been issued, if CCC does not receive complete payment on a timely basis.

7) **General Limits on Use.** Unless otherwise provided in the Order Confirmation, any grant of rights to User (i) involves only the rights set forth in the Terms and does not include subsequent or additional uses, (ii) is non-exclusive and non-transferable, and (iii) is subject to any and all limitations and restrictions (such as, but not limited to, limitations on duration of use or circulation) included in the Terms. Upon completion of the licensed use as set forth in the Order Confirmation, User shall either secure a new permission for further use of the Work(s) or immediately cease any new use of the Work(s) and shall render inaccessible (such as by deleting or by removing or severing links or other locators) any further copies of the Work. User may only make alterations to the Work if and as expressly set forth in the Order Confirmation. No Work may be used in any way that is defamatory, violates the rights of third parties (including such third parties' rights of copyright, privacy, publicity, or other tangible or intangible property), or is otherwise illegal, sexually explicit, or obscene. In addition, User may not conjoin a Work with any other material that may result in damage to the reputation of the Rightsholder. User agrees to inform CCC if it becomes aware of any infringement of any rights in a Work and to cooperate with any reasonable request of CCC or the Rightsholder in connection therewith.

8) **Third Party Materials.** In the event that the material for which a License is sought includes third party materials (such as photographs, illustrations, graphs, inserts and similar materials) that are identified in such material as having been used by permission (or a similar indicator), User is responsible for identifying, and seeking separate licenses (under this Service, if available, or otherwise) for any of such third party materials; without a separate license, User may not use such third party materials via the License.

9) **Copyright Notice.** Use of proper copyright notice for a Work is required as a condition of any License granted under the Service. Unless otherwise provided in the Order Confirmation, a proper copyright notice will read substantially as follows: "Used with permission of [Rightsholder's name], from [Work's title, author, volume, edition number and year of copyright]; permission conveyed through Copyright Clearance Center, Inc." Such notice must be provided in a reasonably legible font size and must be placed either on a cover page or in another location that any person, upon gaining access to the material which is the subject of a permission, shall see, or in the case of republication Licenses, immediately adjacent to the Work as used (for example, as part of a by-line or footnote) or in the place where substantially all other credits or notices for the new work containing the republished Work are located. Failure to include the required notice results in loss to the Rightsholder and CCC, and the User shall be liable to pay liquidated damages for each such failure equal to twice the use fee specified in the Order Confirmation, in addition to the use fee itself and any other fees and charges specified.

10) **Indemnity.** User hereby indemnifies and agrees to defend the Rightsholder and CCC, and their respective employees and directors, against all claims, liability, damages, costs, and expenses, including legal fees and expenses, arising out of

any use of a Work beyond the scope of the rights granted herein and in the Order Confirmation, or any use of a Work which has been altered in any unauthorized way by User, including claims of defamation or infringement of rights of copyright, publicity, privacy, or other tangible or intangible property.

11) **Limitation of Liability.** UNDER NO CIRCUMSTANCES WILL CCC OR THE RIGHTSHOLDER BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, OR INCIDENTAL DAMAGES (INCLUDING WITHOUT LIMITATION DAMAGES FOR LOSS OF BUSINESS PROFITS OR INFORMATION, OR FOR BUSINESS INTERRUPTION) ARISING OUT OF THE USE OR INABILITY TO USE A WORK, EVEN IF ONE OR BOTH OF THEM HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. In any event, the total liability of the Rightsholder and CCC (including their respective employees and directors) shall not exceed the total amount actually paid by User for the relevant License. User assumes full liability for the actions and omissions of its principals, employees, agents, affiliates, successors, and assigns.

12) **Limited Warranties.** THE WORK(S) AND RIGHT(S) ARE PROVIDED "AS IS." CCC HAS THE RIGHT TO GRANT TO USER THE RIGHTS GRANTED IN THE ORDER CONFIRMATION DOCUMENT. CCC AND THE RIGHTSHOLDER DISCLAIM ALL OTHER WARRANTIES RELATING TO THE WORK(S) AND RIGHT(S), EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ADDITIONAL RIGHTS MAY BE REQUIRED TO USE ILLUSTRATIONS, GRAPHS, PHOTOGRAPHS, ABSTRACTS, INSERTS, OR OTHER PORTIONS OF THE WORK (AS OPPOSED TO THE ENTIRE WORK) IN A MANNER CONTEMPLATED BY USER; USER UNDERSTANDS AND AGREES THAT NEITHER CCC NOR THE RIGHTSHOLDER MAY HAVE SUCH ADDITIONAL RIGHTS TO GRANT.

13) **Effect of Breach.** Any failure by User to pay any amount when due, or any use by User of a Work beyond the scope of the License set forth in the Order Confirmation and/or the Terms, shall be a material breach of such License. Any breach not cured within 10 days of written notice thereof shall result in immediate termination of such License without further notice. Any unauthorized (but licensable) use of a Work that is terminated immediately upon notice thereof may be liquidated by payment of the Rightsholder's ordinary license price therefor; any unauthorized (and unlicensable) use that is not terminated immediately for any reason (including, for example, because materials containing the Work cannot reasonably be recalled) will be subject to all remedies available at law or in equity, but in no event to a payment of less than three times the Rightsholder's ordinary license price for the most closely analogous licensable use plus Rightsholder's and/or CCC's costs and expenses incurred in collecting such payment.

14) **Additional Terms for Specific Products and Services.** If a User is making one of the uses described in this Section 14, the additional terms and conditions apply:

a) ***Print Uses of Academic Course Content and Materials (photocopies for academic coursepacks or classroom handouts).*** For photocopies for academic coursepacks or classroom handouts the following additional terms apply:

i) The copies and anthologies created under this License may be made and assembled by faculty members individually or at their request by on-campus bookstores or copy centers, or by off-campus copy shops and other similar entities.

ii) No License granted shall in any way: (i) include any right by User to create a substantively non-identical copy of the Work or to edit or in any other way modify the Work (except by means of deleting material immediately preceding or following the entire portion of the Work copied) (ii) permit "publishing ventures" where any particular anthology would be systematically marketed at multiple institutions.

iii) Subject to any Publisher Terms (and notwithstanding any apparent contradiction in the Order Confirmation arising from data provided by User), any use authorized under the academic pay-per-use service is limited as follows:

A) any License granted shall apply to only one class (bearing a unique identifier as assigned by the institution, and thereby including all sections or other subparts of the class) at one institution;

B) use is limited to not more than 25% of the text of a book or of the items in a published collection of essays, poems or articles;

C) use is limited to no more than the greater of (a) 25% of the text of an issue of a journal or other periodical or (b) two articles from such an issue;

D) no User may sell or distribute any particular anthology, whether photocopied or electronic, at more than one institution of learning;

E) in the case of a photocopy permission, no materials may be entered into electronic memory by User except

in order to produce an identical copy of a Work before or during the academic term (or analogous period) as to which any particular permission is granted. In the event that User shall choose to retain materials that are the subject of a photocopy permission in electronic memory for purposes of producing identical copies more than one day after such retention (but still within the scope of any permission granted), User must notify CCC of such fact in the applicable permission request and such retention shall constitute one copy actually sold for purposes of calculating permission fees due; and

F) any permission granted shall expire at the end of the class. No permission granted shall in any way include any right by User to create a substantively non-identical copy of the Work or to edit or in any other way modify the Work (except by means of deleting material immediately preceding or following the entire portion of the Work copied).

iv) Books and Records; Right to Audit. As to each permission granted under the academic pay-per-use Service, User shall maintain for at least four full calendar years books and records sufficient for CCC to determine the numbers of copies made by User under such permission. CCC and any representatives it may designate shall have the right to audit such books and records at any time during User's ordinary business hours, upon two days' prior notice. If any such audit shall determine that User shall have underpaid for, or underreported, any photocopies sold or by three percent (3%) or more, then User shall bear all the costs of any such audit; otherwise, CCC shall bear the costs of any such audit. Any amount determined by such audit to have been underpaid by User shall immediately be paid to CCC by User, together with interest thereon at the rate of 10% per annum from the date such amount was originally due. The provisions of this paragraph shall survive the termination of this License for any reason.

b) ***Digital Pay-Per-Uses of Academic Course Content and Materials (e-coursepacks, electronic reserves, learning management systems, academic institution intranets).*** For uses in e-coursepacks, posts in electronic reserves, posts in learning management systems, or posts on academic institution intranets, the following additional terms apply:

i) The pay-per-uses subject to this Section 14(b) include:

A) **Posting e-reserves, course management systems, e-coursepacks for text-based content,** which grants authorizations to import requested material in electronic format, and allows electronic access to this material to members of a designated college or university class, under the direction of an instructor designated by the college or university, accessible only under appropriate electronic controls (e.g., password);

B) **Posting e-reserves, course management systems, e-coursepacks for material consisting of photographs or other still images not embedded in text,** which grants not only the authorizations described in Section 14(b)(i)(A) above, but also the following authorization: to include the requested material in course materials for use consistent with Section 14(b)(i)(A) above, including any necessary resizing, reformatting or modification of the resolution of such requested material (provided that such modification does not alter the underlying editorial content or meaning of the requested material, and provided that the resulting modified content is used solely within the scope of, and in a manner consistent with, the particular authorization described in the Order Confirmation and the Terms), but not including any other form of manipulation, alteration or editing of the requested material;

C) **Posting e-reserves, course management systems, e-coursepacks or other academic distribution for audiovisual content,** which grants not only the authorizations described in Section 14(b)(i)(A) above, but also the following authorizations: (i) to include the requested material in course materials for use consistent with Section 14(b)(i)(A) above; (ii) to display and perform the requested material to such members of such class in the physical classroom or remotely by means of streaming media or other video formats; and (iii) to "clip" or reformat the requested material for purposes of time or content management or ease of delivery, provided that such "clipping" or reformatting does not alter the underlying editorial content or meaning of the requested material and that the resulting material is used solely within the scope of, and in a manner consistent with, the particular authorization described in the Order Confirmation and the Terms. Unless expressly set forth in the relevant Order Conformation, the License does not authorize any other form of manipulation, alteration or editing of the requested material.

ii) Unless expressly set forth in the relevant Order Confirmation, no License granted shall in any way: (i) include any right by User to create a substantively non-identical copy of the Work or to edit or in any other way modify the Work (except by means of deleting material immediately preceding or following the entire portion of the Work copied or, in the case of Works subject to Sections 14(b)(1)(B) or (C) above, as described in such Sections) (ii) permit "publishing ventures" where any particular course materials would be systematically marketed at multiple institutions.

iii) Subject to any further limitations determined in the Rightsholder Terms (and notwithstanding any apparent contradiction in the Order Confirmation arising from data provided by User), any use authorized under the electronic course content pay-per-use service is limited as follows:

A) any License granted shall apply to only one class (bearing a unique identifier as assigned by the institution, and thereby including all sections or other subparts of the class) at one institution;

B) use is limited to not more than 25% of the text of a book or of the items in a published collection of essays, poems or articles;

C) use is limited to not more than the greater of (a) 25% of the text of an issue of a journal or other periodical or (b) two articles from such an issue;

D) no User may sell or distribute any particular materials, whether photocopied or electronic, at more than one institution of learning;

E) electronic access to material which is the subject of an electronic-use permission must be limited by means of electronic password, student identification or other control permitting access solely to students and instructors in the class;

F) User must ensure (through use of an electronic cover page or other appropriate means) that any person, upon gaining electronic access to the material, which is the subject of a permission, shall see:

- a proper copyright notice, identifying the Rightsholder in whose name CCC has granted permission,
- a statement to the effect that such copy was made pursuant to permission,
- a statement identifying the class to which the material applies and notifying the reader that the material has been made available electronically solely for use in the class, and
- a statement to the effect that the material may not be further distributed to any person outside the class, whether by copying or by transmission and whether electronically or in paper form, and User must also ensure that such cover page or other means will print out in the event that the person accessing the material chooses to print out the material or any part thereof.

G) any permission granted shall expire at the end of the class and, absent some other form of authorization, User is thereupon required to delete the applicable material from any electronic storage or to block electronic access to the applicable material.

iv) Uses of separate portions of a Work, even if they are to be included in the same course material or the same university or college class, require separate permissions under the electronic course content pay-per-use Service. Unless otherwise provided in the Order Confirmation, any grant of rights to User is limited to use completed no later than the end of the academic term (or analogous period) as to which any particular permission is granted.

v) Books and Records; Right to Audit. As to each permission granted under the electronic course content Service, User shall maintain for at least four full calendar years books and records sufficient for CCC to determine the numbers of copies made by User under such permission. CCC and any representatives it may designate shall have the right to audit such books and records at any time during User's ordinary business hours, upon two days' prior notice. If any such audit shall determine that User shall have underpaid for, or underreported, any electronic copies used by three percent (3%) or more, then User shall bear all the costs of any such audit; otherwise, CCC shall bear the costs of any such audit. Any amount determined by such audit to have been underpaid by User shall immediately be paid to CCC by User, together with interest thereon at the rate of 10% per annum from the date such amount was originally due. The provisions of this paragraph shall survive the termination of this license for any reason.

c) ***Pay-Per-Use Permissions for Certain Reproductions (Academic photocopies for library reserves and interlibrary loan reporting) (Non-academic internal/external business uses and commercial document delivery).*** The License expressly excludes the uses listed in Section (c)(i)-(v) below (which must be subject to separate license from the applicable Rightsholder) for: academic photocopies for library reserves and interlibrary loan reporting; and non-academic internal/external business uses and commercial document delivery.

i) electronic storage of any reproduction (whether in plain-text, PDF, or any other format) other than on a

transitory basis;

ii) the input of Works or reproductions thereof into any computerized database;

iii) reproduction of an entire Work (cover-to-cover copying) except where the Work is a single article;

iv) reproduction for resale to anyone other than a specific customer of User;

v) republication in any different form. Please obtain authorizations for these uses through other CCC services or directly from the rightsholder.

Any license granted is further limited as set forth in any restrictions included in the Order Confirmation and/or in these Terms.

d) ***Electronic Reproductions in Online Environments (Non-Academic-email, intranet, internet and extranet).*** For "electronic reproductions", which generally includes e-mail use (including instant messaging or other electronic transmission to a defined group of recipients) or posting on an intranet, extranet or Intranet site (including any display or performance incidental thereto), the following additional terms apply:

i) Unless otherwise set forth in the Order Confirmation, the License is limited to use completed within 30 days for any use on the Internet, 60 days for any use on an intranet or extranet and one year for any other use, all as measured from the "republication date" as identified in the Order Confirmation, if any, and otherwise from the date of the Order Confirmation.

ii) User may not make or permit any alterations to the Work, unless expressly set forth in the Order Confirmation (after request by User and approval by Rightsholder); provided, however, that a Work consisting of photographs or other still images not embedded in text may, if necessary, be resized, reformatted or have its resolution modified without additional express permission, and a Work consisting of audiovisual content may, if necessary, be "clipped" or reformatted for purposes of time or content management or ease of delivery (provided that any such resizing, reformatting, resolution modification or "clipping" does not alter the underlying editorial content or meaning of the Work used, and that the resulting material is used solely within the scope of, and in a manner consistent with, the particular License described in the Order Confirmation and the Terms.

15) **Miscellaneous.**

a) User acknowledges that CCC may, from time to time, make changes or additions to the Service or to the Terms, and that Rightsholder may make changes or additions to the Rightsholder Terms. Such updated Terms will replace the prior terms and conditions in the order workflow and shall be effective as to any subsequent Licenses but shall not apply to Licenses already granted and paid for under a prior set of terms.

b) Use of User-related information collected through the Service is governed by CCC's privacy policy, available online at www.copyright.com/about/privacy-policy/.

c) The License is personal to User. Therefore, User may not assign or transfer to any other person (whether a natural person or an organization of any kind) the License or any rights granted thereunder; provided, however, that, where applicable, User may assign such License in its entirety on written notice to CCC in the event of a transfer of all or substantially all of User's rights in any new material which includes the Work(s) licensed under this Service.

d) No amendment or waiver of any Terms is binding unless set forth in writing and signed by the appropriate parties, including, where applicable, the Rightsholder. The Rightsholder and CCC hereby object to any terms contained in any writing prepared by or on behalf of the User or its principals, employees, agents or affiliates and purporting to govern or otherwise relate to the License described in the Order Confirmation, which terms are in any way inconsistent with any Terms set forth in the Order Confirmation, and/or in CCC's standard operating procedures, whether such writing is prepared prior to, simultaneously with or subsequent to the Order Confirmation, and whether such writing appears on a copy of the Order Confirmation or in a separate instrument.

e) The License described in the Order Confirmation shall be governed by and construed under the law of the State of New York, USA, without regard to the principles thereof of conflicts of law. Any case, controversy, suit, action, or proceeding arising out of, in connection with, or related to such License shall be brought, at CCC's sole discretion, in any federal or state court located in the County of New York, State of New York, USA, or in any federal or state court whose geographical jurisdiction covers the location of the Rightsholder set forth in the Order Confirmation. The parties expressly submit to the personal jurisdiction and venue of each such federal or state court.