Unspoken Intentions and the Rooted People Heard Me All the Same

By

Deborah Silver

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For my mom and my dad.

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“No knowledge is ever lost; nothing can ever be forgotten. Carefully held by the trees, the memory of our knowledge is continually scribed by the land.”

Monica Gagliano

Introduction

As a child, my father Herman Silver was taken from his parents and brought to residential school.[1] When he was twelve years old, he ran away from residential school for the first time and then ran away again when he was fourteen years old. As a young man he fled to the United States to become a logger because in the 1950's, a young Indigenous man could make decent money in the logging industry. My father did not meet my mother Barbara until they were teenagers, even though they were from the same small reservation of Semá:th.[2] My mother did not have to go away to school; she was able to go to day school and live at home with her parents[3]. My parents married and had their first of twelve children by the time my mother turned seventeen. The residue of the troubles they overcame in their youth lingered throughout my childhood.

I did not attend traditional ceremonies as an adolescent because the Semá:th longhouse[4] burnt down when I was nine years old. I was nineteen years old when the Longhouse was rebuilt, but at the time my mother did not want me involved with traditional ceremonies. My parents were involved with ceremony before I was born and for the first few years of my life, but their presence at the Longhouse tapered off with age and eventually they stopped attending ceremony. I am told my father was intelligent, articulate, passionate

[1] "Indian Residential Schools comprised places without places, non-places where Indigenous children, by design, were meant to no longer feel at home in their own societies, cultures, communities and families." (Carr, ii) Residential schools were a form of colonization, oppression and an attempt to kill the Indian within the child.
[2] Semá:th is located on and around Sumas Mountain in Abbotsford.
[3] I asked my mother why she did not have to go to residential school her response "I don't know." From the stories I have been told day schools had the same agenda as residential schools.
[4] Longhouse is interchangeable with Smokehouse and Big House all of which are buildings where ceremony is held.

and honest which made him well-respected within the Stó:lō[5] community and ceremonial gatherings. Being his youngest child, I was not fortunate enough to hear him speak at large traditional gatherings. I have one memory of him scaring me with his ceremonial regalia when I was maybe four years old. That fear stuck with me. Through my early twenties, I was afraid to attend ceremonies and hesitant to enter the buildings in which they were held.

I realize now, for me, that fear was belief in spirit, in the unseen but felt, in moments of connecting to something indescribable. So, I hold on firmly to my culture and my cultural teachings, because they are my connection to my father, my mother and all those who have walked before me.

In my late twenties I went through a cultural rebirth,[6] which taught me to love and be proud of who I am and strengthened my relationship with S'ólh Téméxw.[7] I was hungry[8] for knowledge and teachings of my Stó:lō Coast Salish people so I could carry myself in a good, respectful manner. I became more aware of my connection to my people and the land we live on. I fell in love with a woman who knew more about Coast Salish tradition than I did, and she taught me and continues to teach me about our culture, sx̲wōx̲wiyám[9]

[5] Stó:lō is the Halq'eméylem word for river. When referring to the Stó:lō community I am referring to the people of the river, the nations within the Stó:lō Nation. Halq'eméylem is the upriver dialect of Halkomelem, the language of Coast Salish people.
[6] Cultural rebirth is an initiation into Coast Salish cultural ceremony.
[7] S'ólh Téméxw is the Halq'eméylem name for the shared territory of the Stó:lō. The English translation is "our world" or "our land".
[8] The term "hungry" is often used by speakers at traditional gatherings while speaking of teachings because the words and teachings nourish the spirit.
[9] Sx̲wōx̲wiyám translates to "legend, story from transformer or traditional story" in Halq'eméylem. Sx̲wōx̲wiyám are stories with lessons, morals and values.

and about plants. I have come to understand cultural knowledge is earned. If I were not in an intimate relationship with an individual who has earned the respect of elders and the Stó:lō community, I would have to rely heavily on my relationship with my parents or develop relationships with elders and knowledge carriers[10] to learn traditional teachings. Being in a relationship with a plant practitioner has given me the opportunity to help with harvesting plants, learn about creating a relationship with them, and observe the making of medicine with the rooted people.[11] With a better understanding of Coast Salish cultural teachings related to plants, came a desire to have a better understanding of the western scientific perspective of plant communication. Western science as explained by Dr. Little Bear is separation, isolation, mathematics, and measurements opposed to Indigenous knowledge which is "wholeness, spirituality, waves as opposed to particles, everything being about relationships and everything being animate."[12] Over the course of my research, I have come to accept my personal benefit of understanding both western science and Indigenous knowledge and how both have contributed to the success of my art practice thus far.

While hiking I began to observe the way trees grew together or away from one another, and whether they were straight, bent or twisted. I wanted to understand the choices the trees made while growing; I had a feeling the answers would relate to plant

[10] A Cultural Knowledge Carrier is an individual with extensive knowledge of and experience with culture. The term "keeper" instead of "carrier" is also used. Victor, who is referenced throughout the paper, prefers "carrier" because she is not keeping the knowledge for herself, she is carrying it forward for future generations.
[11] The term "rooted people" was introduced to me by Coast Salish Cultural Knowledge Carrier Carrielynn Victor who was taught plants are our ancestors. Throughout the paper I will use "plant" and "rooted people" interchangeably.
[12] Little Bear, Leroy. *Big Thinking & Rethinking: Blackfoot Metaphysics.* Youtube. 13:51.

communication which I organize into three categories: intraspecies (pine seedling to pine seedling), interspecies (paper birch to Douglas fir) and plant to human.

Although I would prefer to create artwork which relies on the Coast Salish knowledge and teachings, I feel it necessary to incorporate western scientific reports and evidence to help navigate through an academic system. My research incorporates forest ecology research relating to plant communication, and Coast Salish cultural knowledge and teachings. I divide my research this way mainly because the analytical mind[13] struggles with accepting Coast Salish cultural knowledge, teachings and methodology without some form of western scientific evidence to support what Coast Salish people believe to be true and have passed down from generation to generation.

The initiation into cultural ceremony brought forth a strong connection to the land and an innate sense of protectiveness of what I love whether it be people or S'ólh Téméxw. The latter was new to me I had not previously concerned myself with the environment or what happened to S'ólh Téméxw, but now I feel a sense of duty to at the very least draw attention to what human beings risk losing. My connection to S'ólh Téméxw redirected my art practice and inspired *Their Words Echo Through My Core,* 2018 (Fig. 1) an installation of 196 photographs and a 10 minute and 36 second audio recording played in a loop through four speakers for my final project for my Bachelor of Fine Arts Degree at the University of the Fraser Valley. The photographic installation *Their Words Echo Through My Core,* was a celebration of the interconnectedness of a forest, whose

[13] When I refer to the "analytical mind" I am referring to academics or those who question Coast Salish/Indigenous culture.

underground pathways provide life and support in ways beyond the human imagination. The end of my BFA was the beginning of my exploration of the interconnected relationship of Coast Salish cultural knowledge and plant communication research.

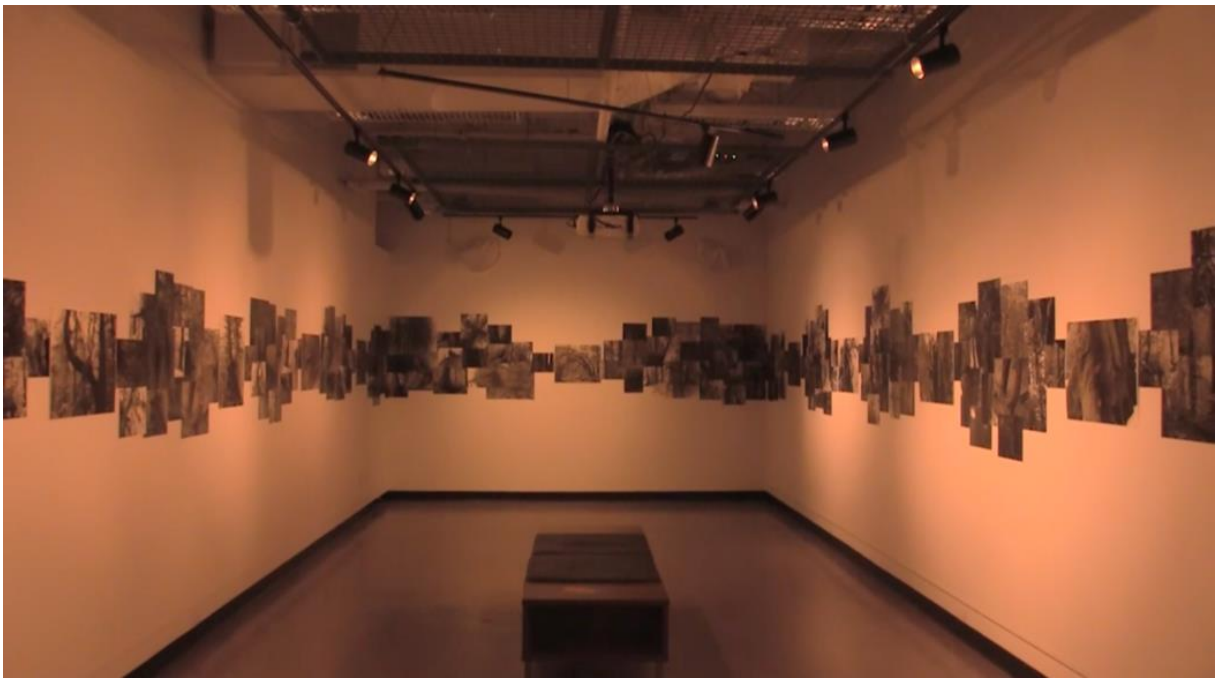

Fig. 1 – Deb Silver. *Their Words Echo Through My Core* (2018). Silver Gelatin, RC and Fiber prints. Dimensions variable.

Intertwining Coast Salish knowledge and western scientific evidence is the foundation of my art practice. I was taught the emotions I feel while creating will flow through me and into what I produce, which is why when doing anything it is important to have a good mind and a good heart. I have been taught in Coast Salish culture plants are rooted people believed to be ancestors providing help and teachings when needed. I learned this from Coast Salish Cultural Knowledge Carrier Carrielynn Victor. Victor inspired me to acknowledge the spiritual aspect of plant communication and the personal relationship I have with the plants I photograph. I enjoy finding ways to incorporate the research of

ecologists and foresters who have the same beliefs and understandings I do regarding plant communication. I tend to relate to the ecologists and foresters who express emotion when referring to plants, like ecologist Suzanne Simard who gave a TED Talk that introduced me to the mycorrhizal network. Her reference to the spirit of the forest and her respect for the mother tree are relatable and admirable. Ecologist Monica Gagliano's unwavering bravery to be true to her beliefs, who she is, and proudly tell her story of creating relationships with the plants she is researching inspired me to further explore visually my spiritual relationship with plants. Stephen Harrod Buhner has given me an understanding of time and science. And Peter Wohlleben, who wrote the novel my son gave to me disguised as homework so I could finally read a book I might enjoy (Fig. 2), has become the voice I often turn to when I want to simplify a scientific document.

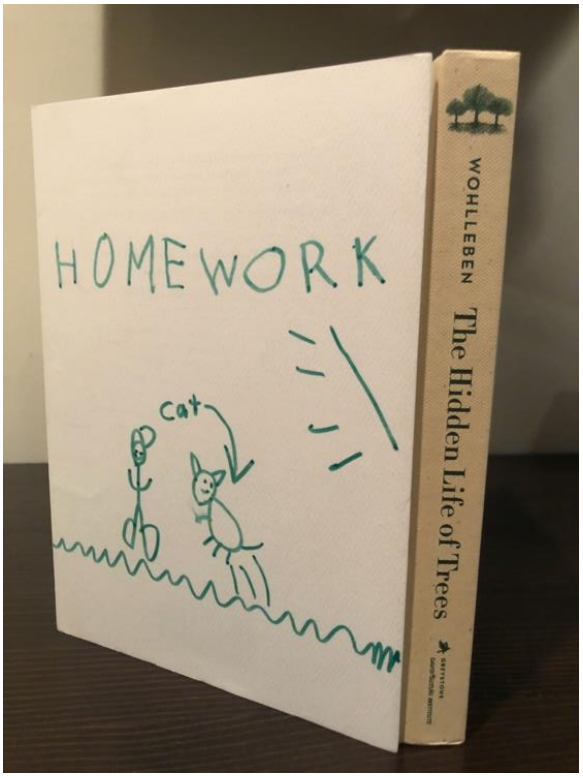

Fig. 2 – Smithx, W. *Reworked cover art of The Hidden Life of Trees* (2016). Marker on paper. 5 ½" x 7 ¾".

The knowledge I have gained, from the five individuals mentioned continues to be the foundation and core interest of my art practice. Finding different ways to present the same information knowing I am often repeating myself is a conscious act because it is the way I was taught to teach and learn. The repetitive approach to teaching is how my ancestors have always lived. Our songs are repetitive and traditional speakers often say the same information but word the teaching, lesson or story differently, because the way we all receive information differs from one another. But that echo of information is always processed and its importance carries on. I did not fully understand this until I watched Dr. Leroy Little Bear's *Big Thinking & Rethinking: Blackfoot Metaphysics*:

> In the native world everything has to be renewed the knowledge, the love and so on. Things like that have to be renewed all the time that's why we tell the same stories, we do the same ceremonies, we sing the same songs and even if you listen to native songs our songs are very repetitive. It's about renewal.[14]

Although Blackfoot and Coast Salish cultures have their differences, they also have important similarities such as love for the land, and respect for tradition. Little Bear gave new perspective to my understanding of why I continue to use the same information and why I revisit the same resources. For me as an artist it is important to honor the people who teach me, as well as the medium and materials I work with.

[14] Little Bear, Leroy. *Big Thinking & Rethinking: Blackfoot Metaphysics.* Youtube. 15:58.

When I begin a new project, I ask myself which medium will best support this idea? Which medium will bring forth the emotion I want the viewer to feel? For most of my artwork, film photography or copper etching best portrays the emotion I want to convey because of the time required to develop quality photographs and prints. Over the years I have allowed myself to be vulnerable through my art and occasionally I reluctantly acknowledge my feelings of sadness, longing and loss. Time is important to my art practice because it slowly healed me, gave me courage and allowed me to evolve as an artist. My process is a subtle nod to time, an unspoken acknowledgment of the time it takes for a plant to grow and the time it takes to create a print in the darkroom or the print studio. I want the viewer to know I took my time producing each project and if the viewer is not acquainted with the process of film photography or copper etching, I fear they may be missing part of the artwork. Taking into consideration the lack of knowledge the public has of film photography and copper etchings it could be a metaphor for the lack of understanding of Coast Salish cultural knowledge and teachings.[15]

Both mediums, film photography and copper etching, are difficult to work with as they require a great deal of patience, time, attention to detail and solitude while working in the studio. I was drawn to printmaking in the second year of my bachelor's degree. The necessity of a clean workspace and the meticulous nature of the process appealed to me. The time, patience and skill required in the process of copper etching to produce one

[15] In Coast Salish teachings the men and women who drum and sing often have guidance from a family member and go through thorough training, so they are aware of their responsibilities to the people and to their drum. The importance of a drum and the role it plays in cultural settings are not always made public information, but xwélmexw people can be seen online and in public singing with a drum. Which is a possible reason many people often purchase their own drum and do as they please. The idea of purchasing a drum and not knowing proper protocol to me is like buying a film camera and not having the training to take photographs.

good print is very therapeutic for me: like turning off a mental switch and allowing my body to move freely. When I work with photography the process is similar; I allow my body to be present in the space, while keeping my intentions in my subconscious mind. To produce a quality photo, I require a great deal of determination and patience, which were not characteristics I would have used to describe myself before I became interested in film photography. The skills I have acquired over the years have become a sort of muscle memory. I still consider the time in the darkroom the work and the hard part, even though it is the most rewarding.

Like root systems and waterways in forests I find images produced by an analog enlarger in a darkroom and images produced by a press in the print studio are often briefly admired then passed by. Film photography and the printing press are a part of the foundation of current advances in technology. It is now standard for mobile phones to come equipped with high quality digital imaging technology. The ability to reproduce images that we take for granted today was founded in the invention of the printing press. Like root systems and waterways are the foundation of a healthy, complex, natural environment, early print technology spawned a vast network of image and text reproduction that has shaped our world and connections. Despite the convenience of current technological advances film photography and the printing press remain essential to my art practice.

The artwork I create is reliant on the success of nature and the strategic ways plants choose to grow. The mother trees have a well-planned future for their seedlings to efficiently absorb sunlight. However, seedlings make the choice to grow straight up

towards the sky or bend and curve towards the light. I believe trees know if they choose to bend and curve, they are less likely to live hundreds of years and return to the earth faster than the straight trees who follow the rules laid out for them by their ancestors. When I began photographing trees the bent and curved trees were most appealing to me because they created interesting shadows within a frame, and they showed resilience by adapting to their environment. Although those adaptations could create tremendous obstacles later in their life, I felt obligated to document them for artistic reasons.

I Belong to the Land

My first semester at Emily Carr University I was inspired by an artist talk given by Carol Sawyer in which Sawyer discussed *The Natalie Brettschneider Archive* (Fig. 3) an ongoing series of multimedia artwork of a fictional character. Although I support and appreciate the feminist concepts of Sawyer's *The Natalie Brettschneider Archive,* I was more intrigued by the fact that Sawyer has managed to continue to successfully contribute to the same series for over twenty years. When I began my Master of Fine Arts degree, I was unsure of whether it was acceptable to continue to create art relating to plant communication. Sawyer's artist talk demolished all uncertainty for me.

Fig. 3 – Carol Sawyer. *The Natalie Brettschneider Archive*. 2020. Installation. Koffler Gallery, Victoria. Kultura Collective. Web. 4 Feb. 2021.

I was overwhelmed with gratitude to be in a situation where I could spend my days creating art and I knew I was in the Master of Fine Arts program because of the research of the ecologists, foresters, and cultural knowledge carriers I went to and continue to go to for help with my art practice. I felt as though I needed to honor them. I tend to rely on the knowledge I have gained from ecologists Suzanne Simard and Monica Gagliano, forester Peter Wohlleben and Coast Salish Cultural Knowledge Carrier Carrielynn Victor, so I named a print after each of them in a series titled, *I Belong to the Land* (Fig. 4). *I Belong to The Land* is a series of four copper etching prints and a letter to a fictional character, from the 15th century.

Fig. 4 – Deb Silver, *I Belong to the Land* series (2019). Copper etching. Dimensions variable.

I knew I wanted to produce this work with copper etching prints, but I was unsure of the relationship between copper etchings and botany. Shortly after I began my research, I found botanists began using copper plate etchings in the late 1400's to share images with greater detail of the plants they researched. This gave me the time period in which I was to base a fictional character of my own, who was inspired by Sawyer's *Natalie Brettschneider*.

I wanted the fictional young man to have knowledge no one else in the 15th century could acquire. The only way to explain it was that the plants spoke to him. The young man was separated from his group for three nights while travelling through the mountains. On the fourth morning when he awoke, he could hear the plants speaking to him. They told him which plants he could eat safely, then guided him to water. The young man bathed in the

creek then sat on the bank and listened to the stories of the plants and how they came to be. Later, when reunited with his people, the young man became a social outcast because of his outlandish claims of speaking plants. He wrote a letter to his mother accompanied by four images of what he believed to be true, visual representations of the knowledge he gained while spending time with the plants: trees carry their life story in their trunk, plants communicate through an underground network of root systems, trees have the ability to scream when they are dehydrated (which feels like a vibration to other plants), and the first cedar tree was a product of the death of a generous man named x'páy,[16] who was always willing to help his people. With the letter the young man explained to his mother he can no longer live with people who do not share these beliefs. He informed her that he must return to the mountains to live with the plants because he belonged to the land.

While researching plant communication during the Fall semester of 2019, I read the book *Thus Spoke The Plant* by Monica Gagliano. Gagliano insists plants and trees are capable of having conversations with human beings. She believes plants speak to her and those who are trained to communicate with plants. Gagliano's journey into the research of plant behaviour and communication stems from a vivid dream of an old tree calling to her from the depths of a jungle in Peru. For several nights the dream persisted showing Gagliano different aspects of the living environment of the tree, known as Socoba a *planta maestra*, and eventually introducing a Shipibo man. The Shipibo man known as Don M, the *maestro vegetalista,* the plant shaman for the local community where Socoba lives, became a

[16] The story of x̲'páy is sx̲wōx̲wiyám. X̲'páy was a generous man who was always willing to help his people. When he died, he was buried and where his body was laid to rest the first cedar tree grew. From the cedar tree Coast Salish people benefit greatly.

guide and helper when Gagliano travelled to Peru. Gagliano's time with Don M and Socoba, was the beginning of her understanding of building a relationship with plants.

The belief that a plant could travel to people in their dreams was not farfetched to me, because Victor shares the belief; we have had several casual conversations about establishing a similar relationship with rooted people. Victor and Gagliano both believe once a relationship is developed between a person and a plant, the plant remains a teacher for life.

The garden pea was the plant Gagliano used in her experiment "Learning by Association in Plants." In this experiment, Gagliano showed that "associative learning is an essential component of plant behaviour" (Gagliano, et al 2016). The *Mimosa pudica* or the "sensitive plant" was the plant of choice in a groundbreaking experiment "Experience Teaches Plants to Learn Faster and Forget Slower in Environments Where It Matters," (Gagliano 91) determining plants ability to learn, remember, and differentiate between danger and non-threatening disturbance. In order to make the series *I Belong to the Land* cohesive; I chose a tree section instead of a garden pea or *Mimosa pudica* for the print *I Belong to the Land – Gagliano* (Fig 5).

Although both plants the garden pea and *Mimosa pudica* are strongly associated with Gagliano and would have made beautiful copper etching prints, the reason I did not use them is because of a story from *Thus Spoke the Plant* that resonated with me. Gagliano

discussed an experience she had with a tree during a Hanbleche yapi[17] ceremony hosted by Mato Ta Pejuta Wakan Najin in the California mountains. During the ceremony Gagliano laid under an old oak tree for four days. Within those four days Gagliano lost track of time and became doubtful of herself and unsure of her prayers. At which time the oak tree began to speak to her "'Tell our stories,' he stated with authority" (Gagliano 78). This phrase, "Tell our stories," inspired me to use a tree section to represent some of what I have learned from Gagliano.

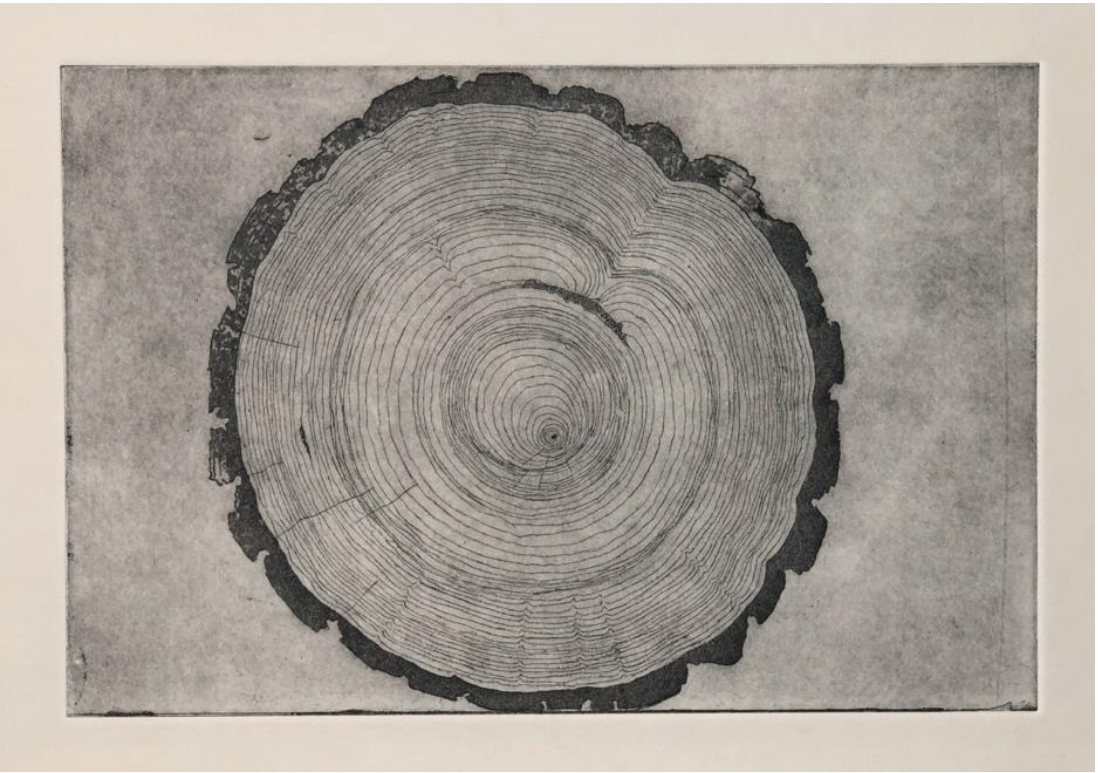

Fig. 5 – Deb Silver. *I Belong to the Land – Gagliano* (2019). Copper etching on paper. 6" x 9".

[17] Hanbleche yapi is a Lakota vision quest ceremony.

From my understanding trees carry the effects of the environment within their rings. They have the ability to show which stresses were present in their environment and when those stresses occurred. I wanted to use a tree section to be a visual representation of a tree telling its life story to the viewer. In her TED Talk, Suzanne Simard explains that trees use their root system to pass down wisdom to their seedlings to help the young trees withstand future stresses. The knowledge of the past is held within the tree to benefit the survival of the forest and to contribute to a complex healthy ecosystem. The sharing of the tree's stories is much like sx̲wōx̲wiyám told by a knowledge carrier in a Coast Salish community. Younger generations benefit from the wisdom of their ancestors.

To prepare the copper plate, I sanded it to give it texture. I then transferred an image of a tree section I found online to the copper plate with graphite paper. I used a found image of a tree section with fire damage markings and added wind breakage to the tree rings. I guessed wind breakage would have been the most likely cause of damage to a tree in the fifteenth century, so I wanted it present in the *Gagliano* print thus I altered the found image slightly to represent the visual story I wanted to tell. I left the fire damage markings as a lingering reminder of human effects on the environment.

The idea of incorporating Coast Salish knowledge and teachings was daunting for me when I began taking art classes in 2012. At that time, the concept of creating a relationship with a plant to aid in my art practice would have seemed unnatural – I did not feel confident to proudly produce artwork using Coast Salish methodology. I was a young artist in need of a mentor or a fellow Coast Salish/Indigenous woman to look up to or work alongside. I

felt it important to have a female mentor because a woman would have the same obstacles to overcome and an understanding of my struggles to gain success in the community. I found myself drawn to a young respectable Coast Salish woman, Carrielynn Victor who over the years has gained a reputation among academic institutions, and within the Stó:lō community, as a reliable source and cultural knowledge carrier for the Stó:lō people. With knowledge about plants and tradition and a willingness to share, Victor aided me with several artworks. Victor is an environmental consultant and a contemporary artist who puts a modern twist on traditional story with geometric three-dimensional patterns. Victor has an ability to tell a story through art with minimal figures for example her *Cedar Man Story* (Fig. 6).

Fig. 6 – Carrielynn Victor. *Cedar Man Story* (2012). Acrylic on canvas. Chilliwack Hospital, Chilliwack, BC, Canada.12” x 48”.

With six figures Victor showed the transformation of a man, x’páy turning into a cedar tree. The image resonated with me because x’páy’s story altered the way I view plants; I became mindful of their energy and considerate of their wellbeing. With her permission, I transferred the six images from her painting *Cedar Man Story* to a two-plate etching print

(Fig. 7). Honoring Victor by recreating her own painting in a different medium for me was like telling the same story verbatim with an emphasis on what I believe to be important metaphorically - copper etching. One of the many teachings I have learned from Victor is every storyteller has their own approach, and their own beliefs about which event needs to be emphasised in each story:

> The importance of remembering a story and holding true to the elements of a story that needed to be carried forward, integrity was key…certain families would be trusted to remember certain histories and certain narratives…those families would always pass on those narratives to their next generations…in that collective holding of stories you'd have a village or a nation of people each holding different aspects of the history of the people…that's another reflection of a social responsibility and interdependence upon one another.[18]

Each person listening to the same story benefits from a different section of the story than other individuals and they all will carry forth the lessons learned. The responsibility of elders is to educate the next generation; children benefit from their grandparent's knowledge[19] and seedlings grow from the wisdom passed down from the mother tree through the mycorrhizal network. A seedling growing on a windy slope may interpret information different than a seedling growing on a windy flat plain. But they will both need to twist to create a spiral grain to help withstand windstorms and or heavy snowfall

[18] In person interview with Carrielynn Victor regarding sxwōxwiyám. 2017.
[19] Traditionally grandparents tended to their grandchildren while the child's parents were hunting and gathering food.

(Campbell). The importance of a story and passing down information is so we can all take what we need from the teachings of our ancestors and carry on in a good way.

Fig. 7 – Deb Silver*. I Belong to the Land – Victor* (2019). Copper etching on paper. 6” x 9”.

Simard’s TED Talk laid the foundation for my research in plant communication and was my introduction to the “wood wide web.” The wood wide web is a term coined by Simard referring to the underground network also known as the mycorrhizal network. Simard proved trees are capable of sharing carbon, nitrogen, phosphorus, water, allele chemicals, and hormones through the fungal network connecting them. The mycorrhizal network also aids with sending defense signals from one plant to another to warn of predators. The discovery of the mother tree or hub tree proved to be an integral concept for Simard. Using isotopes, Simard proved the mother tree sends more nutrients to their

seedlings than other surrounding seedlings, proving trees can recognize their young. The mother tree will also reduce the span of her root system to make room for her seedling to flourish. When injured or dying the mother tree releases stored nutrients and wisdom into the mycorrhizal network to her seedlings, to help aid in the resistance of future stresses. Sadly, the future stresses for young trees are climate change and the forestry industry. Simard acknowledges the importance of having a diverse complex system to ensure the longevity of a forest. Leaving the mother tree and reinforcing diversity in a clear cut aids the community and mycorrhizal network to heal at a faster rate.

Simard's discovery of the interconnectedness of trees has become a fundamental component within my art practice. Simard's research made it possible for me to publicly proclaim the teachings of my ancestors – that plants and trees can communicate.[20] For these reasons I felt it necessary to create a print representing the knowledge I have gained from Simard. I was curious as to how the mycorrhizal network would look from the perspective of below (Fig. 8). The dark line work represents the roots of a tree and the thin line represents the mycorrhizal network.

[20] It is important to note that Simard does not claim to prove trees communicate verbally with human beings.

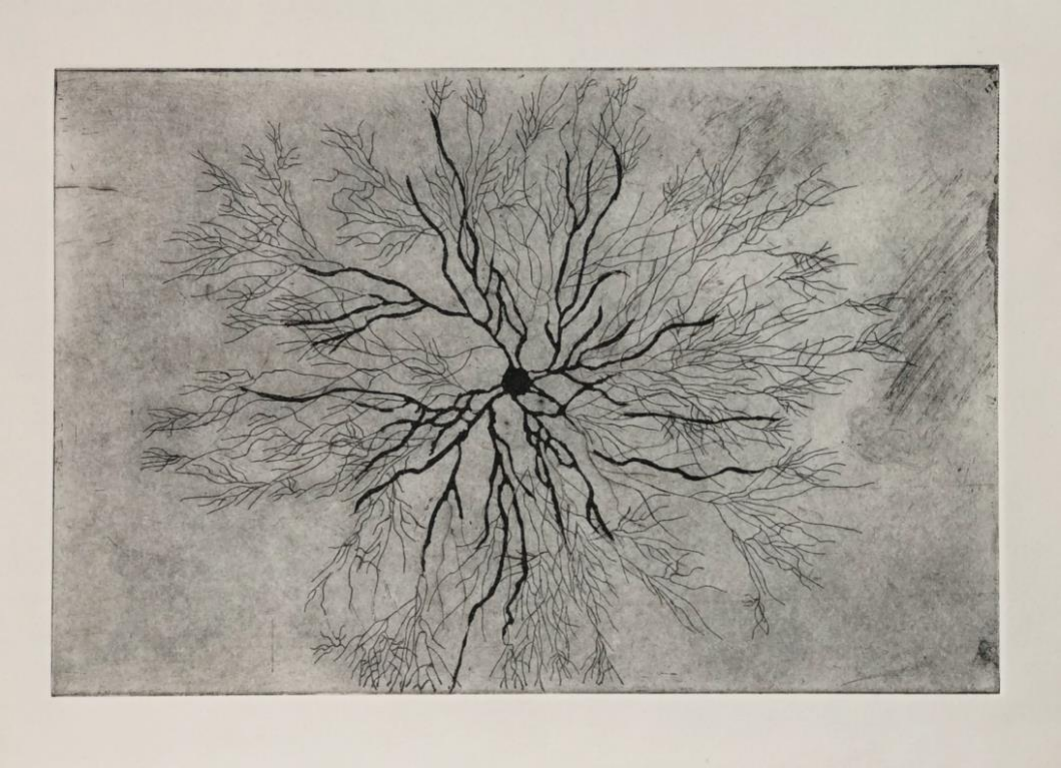

Fig. 8 – Deb Silver. *I Belong to the Land – Simard* (2019). Copper etching on paper. 6” x 9”.

The perspective and idea are not new. Mycorrhizal networks have been represented many times before, though predominantly as scientific illustrations, and not in the context of fine art. For example, the images created by Erwin Lichtenegger are documents of scientific root research created over the course of his career as an agricultural scientist. Lichtenegger documented detailed drawings of over one thousand plants root systems. Lichtenegger traveled Europe studying plant root systems at different elevations, consistently producing detailed drawings during his research (Fig. 9). Lichtenegger recorded important details with each drawing, including the height of the plant, and depth and diameter of their root system.

Fig. 9 Erwin Lichtenegger. *Geranium sylvaticum* (1992). Pen drawing. Wageningen University & Research, Wageningen, The Netherlands. Dimensions unknown.

In his book, *The Hidden Life of Trees,* Peter Wohlleben reaffirms Simard's forestry research on tree communication. Wohlleben emphasizes trees communicate through vibrations in their trunks which travel down their root systems to communicate with neighboring trees. These vibrations can travel at the speed of one third of an inch per second (Wohlleben vii). According to Wohlleben and scientists at the Swiss Federal Institute for Forest, Snow, and Landscape Research, trees scream when they are dehydrated. The scream is a vibration throughout the trunk of the tree (Wohlleben 48). Not only are the trees themselves able to vibrate to create sound as a form of communication, root systems also use sound to connect with one another. The roots of trees crackle underground to inform their neighbors of their location so they can meet and begin sharing nutrients (Wohlleben 13).

The idea of a tree screaming from dehydration was haunting I could not stop thinking about what that would look like. I began experimenting with rosin in the print studio allowing the heat of the rosin to increase faster in some areas than others. I wanted the distorted image to represent what I considered a visual representation of a tree screaming from dehydration (Fig. 10).

Fig. 10 – Deb Silver. *I Belong to the Land – Wohlleben* (2019). Copper etching on paper. 4” x 5”.

As I understand community success is reliant on the communication skills each individual possesses. In order for a community of xwélmexw[21] people to thrive there has to be an

[21] xwélmexw is the Halq’eméylem word for Coast Salish people/person.

understanding of the role we all play to contribute to a healthy society. I believe it is my responsibility to go out into the world, learn as much as possible and return to my community with new knowledge to better help my people. I was taught we always help those who come after us. We share our teachings, our stories, and our knowledge so our younger generations do not struggle. Much like a mother tree tending to her young seedlings and sharing her life experience and her mother's life experience with them so they can grow tall and strong to contribute to the healthy, complex ecosystem.

Feet Deep in Wet Earth and Watery Pools

The series *I Belong to the Land,* 2019 was the last work I produced using copper etching while attending Emily Carr University. Although I began my Master of Fine Arts journey with the intention to produce copper etching prints, for my thesis project *Feet Deep in Wet Earth and Watery Pools*, I returned to a strictly photography-based practice, which in its own way is a form of storytelling, a tribute to time and growth, portraits of living beings and an honoring of ancestral knowledge.

I began photographing trees with my Mamiya RB67, a medium format film camera that provides greater detail than the common 35mm camera. I wanted the viewer to see the cracks, bumps, indents and the unique beauty each plant possessed (Fig. 11). To this very day when I approach a plant I intend to photograph, I explain my intention to the plant. For me this part of the process is important. It is the equivalent to approaching a stranger on the street and asking to take their picture – I need permission.

Fig. 11 – Deb Silver. *Untitled* (2018). Scanned medium-format negative.

I began walking through the local trails in Pelhó'lhxw[22] territory photographing plants, waterways and root systems. I noticed the lichen and moss growing on the trees and became curious of the relationship between the complex life forms, and whether or not the relationship was symbiotic. The relationship between lichen and trees is a commensal relationship,[23] in which only the lichen benefits from the relationship without causing harm to the tree. I noticed the abundance of trees growing next to waterways and the advantages and disadvantages those trees have from choosing to grow there. Though the trees along waterways have an immense amount of water, they lack the stability of

[22] Pelhó'lhxw territory now known as eastern Chilliwack.
[23] Commensal relationship is a relationship when only one participant benefits from the relationship while not causing harm to the other participant in the relationship.

growing on solid ground. The bank along waterways tends to erode over time which causes a problem for trees that have established roots along the bank, and they tend to fall over during windstorms or when the bank gives way.

For my thesis project, I wanted to link plants, root systems, waterways, and lichen together in one photo series. The title, *Feet Deep in Wet Earth and Watery Pools,* is a part of a sentence from the novel *The Secret Teachings of Plants,* by Stephen Harrod Buhner. What I did not realise at the beginning of this project while photographing plants, waterways and root systems, was that I was missing a key factor to tie each organism together - I was not photographing fungi. Mushrooms are a product of the fungal mycelium network roughly ten percent of fungi produce mushrooms (Simard 19). According to Simard, fungi “are the building blocks of the ecosystem, the fundamental starting place for how a forest grows” (Simard 20). While hiking through the forest I was consistently overlooking mushrooms and their importance to S’ólh Téméxw.

I had to retrain myself to look at the forest floor while hiking, because I have spent the last eight years looking up at the forest canopy observing the way trees grow together. Now mindful of the mushrooms I intend to photograph, I am always searching the forest floor while hiking. I feel like a hunter – if I am too loud or too fast, I might scare the mushrooms back into the ground, so I walk softly and share my intentions as a new friend. Throughout the process of photographing mushrooms, waterways, and trees and harvesting lichen, I

continue to return to the same location Sxotsaqel[24] Park in Ts'elxwéyeqw Tribe territory.[25] Over the years I have built a relationship with the land in Sxotsaqel Park. I often go there when I need to be uplifted spiritually or simply want to breathe in the fresh air. An artwork I find relatable to my process of walking and creating a connection to the land is Vanessa Dion Fletcher's *Writing Landscape,* 2012 (Fig. 12). Dion Fletcher fashioned a system to hold copper plates to the bottom of her feet and began walking to represent the story of three places that are significant to her. The plates are the conversation recorded between Dion Fletcher and the land. On her website, Dion Fletcher discusses her process of setting up a camera and recording her walk to and from the camera. I have only seen the short clip posted on her website of her walking, but her description sounds like a cycle and if played in a loop the viewer is unsure of her coming or going. The indication of a cycle always brings my mind to the life cycle of a mushroom or a plant, how they come from the soil, live their life and eventually return to the soil to aid in the nourishing of other living beings.

[24] Sxotsaqel is the Halq'eméylem word for "sacred lake". Sxotsaqel is also known as Chilliwack Lake Park.
[25] Ts'elxwéyeqw Tribe Traditional Territory is currently known as western Chilliwack and the Chilliwack River Valley.

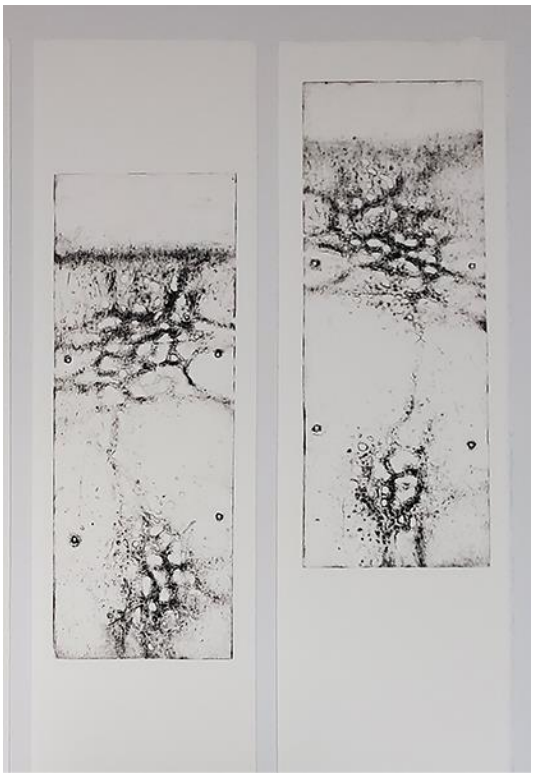

Fig. 12 – Vanessa Dion Fletcher. *Writing Landscape* (2012). Intaglio on paper. 29 15/16” x 5 11/16”.

In the Fall of 2019 while discussing my interest in lichen with Victor, she told me Coast Salish people used lichen as a natural dye, which sparked my curiosity. What would dyeing a photograph with lichen look like? How would this manipulation alter how the viewer interprets my photographs?

I began my lichen research in the Spring of 2020. A friend, to whom I had expressed my interest in dyeing photographs with lichen, emailed me an article titled *Getting Started with Lichen Dyes*, by Alissa Allen. In her examples of dye, Allen used lichen that was not familiar to me and I was unsure whether it grew in Stó:lō territory. The *Letharia columbiana* and *Letharia vulpine* (Fig. 13) lichen presented in Allen’s article, both have

the same physical appearance and produce a similar shade of bright yellow when used as a dye. I preferred the *Letharia* yellow dye over the other lichen Allen used and wanted to harvest *Letharia* for my project. However, I was not certain whether *Letharia* grew in Stó:lō territory and I wanted to use a local lichen for my project. I was taught while harvesting plants that it is important to only take what you need from the land. It is a cultural belief to cause as little disturbance as possible while harvesting plants, so I needed a local lichen I could revisit if necessary, to ensure I was harvesting responsibly.

I walked along trails in the Sxotsaqel Park where the conditions are ideal for *Usnea lichen* (Fig. 14) commonly known as Old Man's Beard.[26] Old Man's Beard is greyish-green lichen that prefers to grow on sick or dying trees because these trees have already lost their leaves. Sxotsaqel Park is nearly seventy kilometers away from my home in Xwchíyò:m[27] and takes one hour and thirty minutes to drive to. The distance from the pollution of the city is what makes Sxotsaqel Park conditions ideal for Old Man's Beard to grow in vast quantities. While walking the trails I was drawn to the green lichen that seemed to hang from every tree branch. I was unsure of whether I wanted to use Old Man's Beard or try to find *Letharia vulpine,* so I could dye my photographs bright yellow. Unfortunately *Letharia vulpine* is not common in Stó:lō territory. However, in the late Spring of 2020 I was hiking in Syilx territory.[28] The air was fresh and sweet from the sap running, and I saw *Letharia vulpine* in person for the first time, I was mesmerized by its bright colour and

[26] I am not actually sure which species of *Usnea* lichen is growing in Sxotsaqel Park but *Usnea* genus is referred to as Old Man's Beard or Beard Lichen.
[27] Xwchíyò:m is the word for "always wild strawberries" in Halq'eméylem. Xwchíyò:m is also known as Cheam.
[28] Syilx Territory is located in the Okanagan. We were hiking in Ashnola territory in the Lower Similkameen.

firm texture, and I managed to harvest a small bundle similar in size to the lichen photographed below. Sadly, I had yet to do the calculations for the amount of lichen I would need to dye a 20” x 24” sheet of fiber paper. Now I know the amount of *Letharia* lichen I had harvested was not enough to dye a single sheet of paper and to get more *Letharia lichen* I would have to drive more than two hundred and seventy kilometers. The small bundle I did harvest was stored outside in a box by my front door. During a windstorm the lichen blew away and I was never able to use *Letharia* as a dye. I also took the lichen disappearing as a sign to stick to my original idea of using a locally harvested lichen for my project.

Fig. 13 – Deb Silver. *Letharia Lichen* (2020). Digital Photo. Dimensions variable.

Fig.14 – Deb Silver. *Old Man’s Beard* (2020). Digital Photo. Dimensions variable.

I went back to Sxotsaqel Park to harvest *Usnea lichen*, Old Man’s Beard. Although my calculations were still not accurate, I knew I needed several cups, but I did not want to

take more than I needed. I harvested from the forest floor, broken branches and dead trees. After the drive home, I began to prepare the lichen for the next day. Dry *Usnea lichen* is firm and sticky like Velcro. I bunched a handful together then began cutting the lichen with a sharp knife. The sensation was like cutting a sponge cake (Fig. 15). I chopped up two cups of lichen then allowed the lichen to soak overnight in water. The next day, I boiled the lichen as the lichen stewed in the pot the once clear liquid became brown like the colour of weak coffee. It had a faint outdoorsy scent until the water began to reach boiling temperature, at which point it had a powerful musky odor that lingered in the space for several days afterward. As a person who is affected tremendously by scents, the smell of the steam rushing to my face carrying an intense smell of lichen made me question whether I wanted to continue with the process. The smell of lichen boiling is not an unpleasant scent, but it was new and at first, I struggled with the overwhelming aroma it gives off. After the prolonged hours of working with lichen in this process, its scent is ingrained in my body and it has become comforting. It evokes long, tireless nights of walking from the dining table, where I stationed the tray that held the dye bath, to the kitchen stove that heated the lichen dye, and back again. The scent is an earthy musk I now feel privileged to know.

Fig. 15 – Deb Silver. *Documentation of preparing lichen* (2020). Digital video still.

Two cups of lichen for three ounces of paper is not a sufficient dye solution but it worked for the 1” x 4” test strips I had dyed. Using the calculation of two cups of lichen for three ounces of fiber, I attempted to dye a 16” x 20” photograph. I tended to the lichen dye bath for several hours without achieving a satisfactory dyed photograph. The resulting photograph was a faint brown that was mistaken for sepia by members of my cohort (Fig. 16). The initial experience was disheartening. In my head I knew what I wanted the photograph to look like, but I struggled to achieve it. I tried leaving photos in dye over night to get a darker tone, but it did not work the colour variation was lacking. I knew I had to start over and research the dye process in greater depth. I went back to Allen’s article to find what I had overlooked with my first reading “(2 cups of lichen to 1 oz of fiber)” in bold print.

Fig. 16 – Deb Silver. *Untitled* (2020). Silver Gelatin Fiber print dyed with Usnea lichen. 16” x 20”

I began the process again in early Fall 2020. I went back to Sxotsaqel Park to harvest more lichen, this time knowing I needed more than I originally thought. Leaving Ts’elxwéyeqw Tribe territory once again, but this time with a grocery bag full of Old Man’s Beard, I was confident I was going to achieve a rich dark brown with the harvested lichen. I did not take into account the weather change, nor the fact that the falling temperatures would affect the lichen and its chemical makeup until I got home and began working with the wet, silky, thread-like lichen. I decided to try something new, and this time did not dry the lichen or soak it overnight because I was impatient and bothered by how time consuming the dyeing process is. However, when I soaked the wet lichen and began to heat it, the solution became a muddy grey. Frustrated, I disposed of the dye solution. Learning from this, I allowed the lichen to dry, then soaked in water over night, and began

the process again. Because my early experiments had turned photographs light brown, I believed that more lichen would make the photographs dark brown. As it turns out, when an adequate amount of *Usnea* lichen is used, it creates an orange dye. I have yet to work with lichen that was harvested in the freezing temperatures of winter so for now I am assuming temperature has not affected my process. When I began to use two cups of lichen for one ounce of fiber paper, the photographs began to turn a tone of orange. Out of respect I wanted to decrease the amount of lichen I was harvesting and using which meant I needed accurate calculations of lichen required to dye a sheet of 20” x 24” fiber paper. I had to figure out the calculations for the weight of the fiber paper I carefully selected. From experience I knew fiber paper would absorb dye better than RC paper. The information provided with the paper I had purchased gave me the weight 255g/m^2 of a single 20” x 24” sheet. I used a website for the conversion g/m^2 to ounces which is 2.79 ounces. The information from Allen 2 cups of lichen to 1 oz of fiber. I know now I need no more than six cups of chopped lichen for my dyeing process to be successful and create orange brown photographs.

My experiments with the lichen dye have taught me that unless the photograph is dyed a dark tone it may be mistaken for sepia. However, if the photograph is dyed lighter (Fig. 16) the viewer does not necessarily question my process; therefore, I desire a dark toned dye. I have an understanding now of the time each photograph needs in the dye bath and the constant attention the lichen dye requires. Victor has reminded me on several occasions the attention each plant requires varies and I need to build a relationship with the lichen if I want my work to be successful.

I have come to the understanding if I consider the dyeing process a burden or a hassle and feel negatively about giving the lichen dye all my attention for two to three hours it takes longer and becomes frustrating. This belief goes back to previously mentioned good mind and good heart because my feelings flow through me and into my artwork. When I began working with lichen as a dye, I needed a constant reminder to be mindful and patient. The process has on several occasions kept me awake into the early morning transferring cold dye out of the dye tray and hot dye in. The process is trial by error and every dye solution is different. I have used lichen on two separate occasions harvested on the same day from the same location and each dye solution provided a different tonal orange. It has been suggested to me other factors may contribute to the dye solution. I store the lichen outside to allow the bugs living in the lichen to wonder out of the bag if they choose before I process the lichen, this could be an altering factor in the dye solution. Also, the quality of water is not consistent because I am using tap water for the dye solution and the chlorine levels may vary from day to day. Most importantly the species of lichen I harvest determines the colour of dye.

I thought to acquire the dark tone, I desire while dying a fiber paper photograph, I had to spend several hours tending to the dye and keeping the temperature high but not boiling. I know now dyeing with lichen is a situation where you get what you get and there is nothing, that can be done to alter the colour of dye produced by the lichen. That is the risk taken when relying on environmental factors. I have no control over the outcome of the colour unless I happen to consistently harvest the exact species of *Usnea* lichen that

produces the colour I desire. I wanted orange dye, while harvesting the lichen I asked the rooted people for orange dye and what I got was light golden brown (Fig.17). For the five photographs in the photo series *Feet Deep in Wet Earth and Watery Pools* (Fig. 18), I allowed the fiber paper to soak in the dye solution for five days and four nights, hoping the paper would darken. The extended time in the dye bath made the paper fragile which led to wrinkles in the final product and the tone remained the same colour after the second day in the dye solution.

Fig. 17 – Deb Silver. *Feet Deep in Wet Earth and Watery Pools* (2021). Silver Gelatin Fiber print dyed with Usnea lichen. 20” x 24”.

I chose to hang the photographs without a traditional frame and without glass because I did not want to create a barrier between the viewer and the image. Following traditional photography presentation each photograph is hung with the midpoint at sixty inches from the floor. The choice to have each photo displayed at the same height is a subtle reminder of the importance of tradition. However, I did intentionally stray from customary

presentation when I decided to produce photos with the large border. The size of the image on the paper is a magnified representation of my understanding of not only Coast Salish knowledge but also of the research conducted by Forest Ecologists. I also felt it was important to make the viewer look closer and take time to observe the elements within each photograph, which I believe to be a necessity when observing another culture and entering a new field of study. I still have a great deal to learn in both areas of interest. In Coast Salish Culture I am considered relatively new to our traditional way of life and although many Ecologists, Scientists and Foresters continue to research the mycorrhizal network there are still many unanswered questions related to plant communication.

Fig. 18 – Deb Silver. *Feet Deep in Wet Earth and Watery Pools.* Installation view. (2021). 3 of 5 Silver Gelatin, Fiber print dyed with Usnea lichen each 20” x 24”.

Fig. 19 – Deb Silver. *Feet Deep in Wet Earth and Watery Pools*. (2021). Scanned medium format negative of photograph produced.

Through my research I have come to understand the importance of interconnection and the value of having a relationship with people, plants and S'ólh Téméxw. In the winter of 2014, I was at a ceremonial gathering and I heard a woman speak of being alone, how the most important relationship a person has is the one they have with themselves. She said, "all you have is yourself and that's okay because you are all you need." I often think of those words, spoken by a woman I did not know. I knew without knowing her; I loved her, I was grateful for her, her time, and her willingness to share. I may never know who she was, and I may never get to tell her that her words altered the direction of my spirit and made me comfortable with being alone. I believe what the woman meant that cold winter night is we are all taught from a young age to take care of ourselves and we all know what uplifts our spirits when we are downhearted. Also, it is important to take care

of yourself first because if you are not well you cannot help those in the community who are in need. For me time alone is healing. I wander the forest alone, confident and comfortable with my own thoughts. With each step my feet cover millions of miles of mycelium and I travel through time and space to a place where I can collect myself and connect with S'ólh Téméxw. Like a seedling in the forest, I need the ones around me happy, healthy and willing to share their wisdom, so together we can create a healthy complex environment for future generations.

Over the course of the master's program, I have unconsciously likened my artmaking process to a healing journey and the rewards are not seen they are felt. That is where culture is taken into consideration within my art practice – my faith like my process is not seen. My art practice is a tool I have used over the years to aid in the wellbeing of my mental, spiritual and physical health. With a desire to quietly rejoice in the journey of healing through time, art and connecting with S'ólh Téméxw; I created *Feet Deep in Wet Earth and Watery Pools* with a good mind, a good heart and a willingness to learn.

Reflection

Reflecting on the process of not only my artwork, my thesis paper and the thesis defense – I am humbled by the possibility that completing my MFA program could very well be the beginning or the end of my art career. One of the many lessons I have learned from the rooted people I have researched is there is no definite answer to which direction a living being may choose to grow. I have come to understand for me the importance of my life lives in growth, acceptance, and finding the light in a place that was taken from my parents – a place they had to fight to return to so their children could have it. The culture, community and family that makes me feel at home was a gift my mother and father have given me. A place I can deeply root my feet to become nourished by the land.

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