LIFE NARRATIVE ETHNOGRAPHY OF WOLASTOQIYIK ELDER CHARLES SOLOMON, MEDICINE MAN: AN APPRENTICESHIP APPROACH

by

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ABSTRACT

Wolastoqiyik (Maliseet) Elder Charles Solomon's life as a practitioner and teacher of medicinal plant knowledge in New Brunswick, Canada, is introduced through a life-history ethnographic approach, which argues for the importance of in-depth, long-term research methods in documenting the narrative complexity of Indigenous Knowledge (IK). Support for this research is drawn from IK research and critical ethnographic theory. Insights emerging from the study of Elder Charles Solomon's work include the importance of interpersonal collaboration in collecting medicinal plants and the dramatic effects of industrialization on medicinal plant gathering areas. Research implications include: the value of combining Indigenous Knowledge research with Western Scientific research, recognition of International law concerning Indigenous Peoples right to practice their cultural traditions including plant harvesting, and the importance of incorporating land-based (groundtruthing) research when conducting an IK study.

Key Words: Wolastoqiyik, Maliseet, Indigenous Knowledge, medicinal plants

DEDICATION

This thesis is dedicated to Wilfred Charles Solomon. This incredible human being changed my life and the lives of so many people in his dedication to a mastery of medicinal plant use and basket making, amongst many other areas.

ACKNOWLEDGEMENTS

This effort was made possible by so many people. From the beginning my parents and grandparents instilled in me a deep sense of respect for the planet and the dynamic human experiences on earth. When I was 16, two of my fellow Reiki (Japanese therapeutic touch) practitioners, Barb Martin and Reni Han, honoured me with an invitation to my first sweat lodge ceremony with Elder Maggie Paul. Since that time our group, The Fran Brown Reiki Centre, has conducted many healing sessions in Wolastoqiyik and Mi'gmaq communities throughout New Brunswick.

The philosophy and policy concentrations of Renaissance College, and the wisdom of the faculty, taught me to look at the world from multiple perspectives. My senior independent study focused on the integration of traditional medicines into the conventional medical system. It was during this course that Dolores Furlong, my course supervisor, connected me with Elder Charles Solomon because of his knowledge of medicinal plants. As detailed throughout my thesis, Elder Charles' teachings proved to only further develop my connection to the earth and understanding of the importance of Indigenous Knowledge in all planetary matters.

At the same time as I was working on my senior independent Renaissance College study, and with Elder Charles as an apprentice, I had the pleasure of taking Imelda Perley's Wolastoqey Latuwewakon/Maliseet language course and David Perley's History of First Nations People in Atlantic Canada course. These classes, through what is now the Mi'kmaq Wolastoq Centre, started to give me a foundation of understanding of

Wolastoqiyik, Mi'gmaq and Passamaquoddy history and culture - something I had not received during my public education nor during my post-secondary education to that point. Since that time, Imelda and Dave have included me in Indigenous research, community education and ceremonies.

Following my graduation from Renaissance College, a trip to visit family in Bangladesh turned into an adventure in pursuit of a traditional doctor, thanks to the medicine Elder Charles wanted me to deliver to a healer he knew I would meet. When I returned from my trip Dolores Furlong encouraged me to present the details of my adventure at a conference she was organizing, Narrative Matters 2004, in Fredericton. Dolores also supported me in the publication of an article, on my experience with the Bangladeshi traditional healer, in the proceedings of the conference.

After I had worked with Elder Charles as an apprentice for a few years he asked me to write about his life. In short order the opportunity emerged to pursue a Master's degree at University of New Brunswick, in conjunction with the Before the Dam research project – a source of institutional support for the fulfilling of Elder Charles' request. I chose the department of Anthropology because of my prior experience with the department in cross cultural communication and medical anthropology classes, and because the Principle Investigator for Before the Dam, Evelyn Plaice, was a member of the department. The Department of Anthropology Master's program is organized in a unique manner. The materials from several seminar reading modules are brought together by each student into a single paper and accompanying presentation twice per semester. The candidates have

to prepare their papers and presentations for the entire department. This gives each candidate an opportunity to gain insight and feedback from a diversity of expert backgrounds in anthropology and archeology. I found this structure forced me to think holistically about how I presented my research and how I designed my thesis research.

At the same time as I was designing my thesis research project, I met Cecelia Brooks. She had recently returned to New Brunswick, after living in the United States for 25 years and working as an industrial chemist in water and waste water treatment. Her father was from St. Mary's and she had always wanted to return to his community. Cecelia became a member of the Before the Dam research team and we spent an entire summer with Elder Charles, on the land, learning about the many medicinal plants he used. Cecelia and I have continued to work together ever since, testing medicines for toxicity, teaching Wolastoqiyik and Mi'gmaq youth about the medicines, conducting Indigenous Knowledge research and promoting the idea of combining Indigenous Knowledge with Western Scientific Knowledge.

After Elder Charles passed in 2011, I took a break from my thesis. The work with Cecelia, that I have described above, felt like the best way to honour Elder Charles' memory, at that time. I have also stayed connected with Terry Young, one of Elder Charles' apprentices. We continued to pick sweetgrass in summer when he returned from his home in Montreal and to text back and forth in Maliseet. Terry has continued to support me in the completion of my thesis and the honouring of our teacher.

I have also stayed connected with Elder Charles' family. Visits for tea or lunch have been an opportunity to reminisce and to hear about the next generation growing up. Elder Charles' granddaughter Ramona Solomon has become a teacher at the school in Kingsclear and is focusing on cultural teachings including teachings of the medicines. Ramona recently invited Cecelia and me to give a presentation at her school on our fall medicine picking excursion with her; she graciously recognized us at this presentation for carrying on her grandfather's teachings.

A fellow Anthropology Master's student and friend, Ramona Nicholas who I met through our mutual connection to Elder Gwen Bear, has also inspired me in this research completion. We were in a gentle race to see who would finish first. She won, and I was able to attend her thesis defense last spring. She did an amazing job in her defense and in her thesis on Indigenous Wabanaki Archeology. Ramona's research inspired me to dig deeper into concepts like Two-Eyed Seeing, which furthered my research on how Indigenous Knowledge and Western Scientific Knowledge can work together.

Pulling together my research into this thesis has been made possible by the members of my thesis committee. Evie has pushed me to polish ideas until more gem-like. Sue has encouraged me to grapple with the implications of what my research means beyond the university, in the realms of policy and legislation. Dolores has grounded me in my story and the power of narrative. Melanie has steered me through the structural nuances of defending and producing a thesis.

And there are many others who have inspired me along this journey in various ways. I am grateful for every bit of it.

Kci Woliwon/Thank You Very Much,

Luke

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Chapter 1: Introduction

"As far as the medicine is concerned, this is something as far as you are concerned. Because you are the one that has been taking a lot of time with me … Working as far as writing a book is concerned that would be great, really."

(Elder Charles responding to my question about why he asked me to write about him.)



Figure 1: Elder Charles playing Crib with the author at author's Grandmother's house.

Photo: Jean Burgess

1.0 Introduction

This thesis is an auto-ethnographic (Davies, 2008) account of my experience as a medicinal plant apprentice of *Wolastoqiyik* (Maliseet) Elder Charles Solomon. Auto-ethnography is a method of research that explores cultural knowledge systems through personal experience (Ellis et al., 2011). I will discuss my experience of apprenticing with Elder Charles Solomon and his knowledge of medicinal plants using a life history

ethnographic approach. Long-term, place-based research, such as the life history approach to ethnography, is important when documenting this type of long-standing knowledge because it enables the researcher to move deeply into the complexity of this knowledge and context (Cruikshank, 2005, 2000). The reflexive nature of a research narrative can facilitate an expanding experience for the attending audience. It can break down the illusion that the ethnographer is simply observing the life of another person, when in fact they are part of the narrative (Abu-Lughod, 1999; Bruner, 1986; Tuck et al., 2014). In this case I was an apprentice before and during my thesis work. I have also continued to be a part of Elder Charles' family, since he passed away in March 2011 and have stayed connected with his network of apprentices.

The effectiveness of apprenticeship ethnography is illustrated through four approaches in my research with Elder Charles Solomon and his students: narrative/reflexive ethnographic theory (Bruner, 1986,; Abu-Lughod (1999, 1991), Indigenous[1] knowledge research (Berkes et al., 2008, Hunn et al., 2005), life history ethnography (Cruikshank, 2005), and land education (Kawagley, 1999; Tuck et al., 2014; Bang et al., 2014).

Each chapter in the body of the thesis follows a common pattern. Each chapter begins with a brief botanical and ethnobotanical description of one of the medicinal plants I studied with Elder Charles. The subsequent section is a narrative of my medicinal plant excursions with Elder Charles and my fellow apprentices. Then I look at Elder

[1] I have chosen to capitalize the term Indigenous throughout this thesis because it is the style deemed most respectful by Wilson (2008) in *Research is ceremony*.

Charles' reflections, as well the reflections of his medicinal plant students, on my questions concerning the importance of each plant throughout his life. Next I assess a dimension of apprenticeship which I found to correspond with one of the medicinal plants, such as listening, and discuss corresponding theoretical conceptions associated with this aspect of apprentice-work. Each chapter concludes with an analysis of the knowledge gathered through my time with Elder Charles and the resulting theoretical implications.

I have structured the thesis in this way because it follows my path with Elder Charles. An interest in medicinal ethnobotany (the use of plants by people for medicinal purposes) drew me to seek out Elder Charles as a local carrier of medicinal plant knowledge. Once I met Elder Charles the narratives of medicinal plant gathering began. The three medicinal plant chapters: muskrat root, sweetgrass, and black ash, follow the sequence in which I learned about these plants from Elder Charles. Elder Charles' request for me to write about his life led me to the Masters of Anthropology program. The course work as well as the thesis process have compelled me to reflect on the meaning I have garnered from my time with Elder Charles. I have reflected on the meaning in two ways. First, I have connected the dimension of apprenticeship that corresponds most strongly to the narrative of each of the medicinal plants, because I have found the concept of apprenticeship, and its various dimensions, to be the most fitting way to describe my experience with Elder Charles. Secondly, I have looked at the theoretical implications that correspond to the medicinal plant narratives and dimensions of apprenticeship. Finally, a concluding chapter has summarized and distilled all of the discussions in the earlier chapters.

This introductory chapter comprises several sections including a background sketch (1.2) of Elder Charles Solomon as well as how I came to meet Elder Charles and the development of this research project. The theoretical orientation section (1.3) follows my progression of ideas through the anthropological literature. Next I outline my methodological orientation (1.4) for the project. The chapter ends with a discussion (1.5) of the emerging concepts from this thesis and a conclusion (1.6).

1.1 Background

1.1.1 Elder Charles Solomon and his historical context

Charles Solomon's life history spans 91 years. From a long line of Wolastoqiyik healers, Elder Charles grew up in the community of *Pilick* (Kingsclear First Nation, New Brunswick), located 20 kilometers northwest of Fredericton on the banks of the *Wolastoq* (Saint John River). Wolastoqiyik are an Indigenous nation who take their name from the river watershed Wolastoq, or the Saint John River, which they have inhabited for thousands of years, as hunters, fishers, medicinal and food plant gatherers, basket-makers and potters and more recently as horticulturists. Roughly 5,000 Wolastoqiyik people have established communities (reserves) in what are now known as New Brunswick, Quebec, and Maine - as well as living throughout the world (Leavitt, 1996). Less than 1,000 people are believed to speak Wolastoq, a member of the Algonquian language family, making the language decidedly endangered (Crystal, 2000).

Wolastoqiyik, with the Mi'gmaq, Passamaquoddy, and Eastern Abenaki, (Penobscot) made up the Wabanaki Confederacy, which was created in the latter part of the 17th century and lasted for nearly two hundred years in response to the tensions

caused by the increasing presence of Europeans in their homeland, Wabanakis (Prins, 1996). Wabanaki means 'People of the Dawnland' and includes what are now New Brunswick, PEI, Nova Scotia, the Gaspe, and parts of Northern Maine.

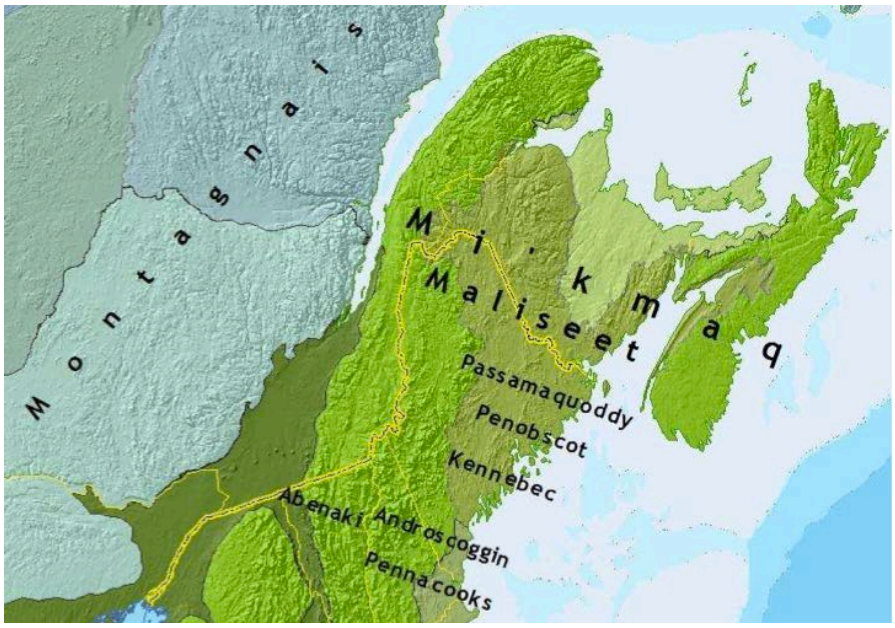


Figure 2: Map of the territory of Wabanaki nations and neighbouring nations (Baumflek, 2015). It is based on a combination of Indigenous jurisdictional maps. The various shades of green represent different ecoregions.

When the Europeans arrived in Wabanakis, starting in the 16th century they brought with them European ideas and perceptions about private property. With this understanding they failed to recognize the complex usufructory arrangements of land tenure, based on cyclic hunting, fishing, and planting areas, which they encountered (Calloway, 2008).

During the earliest stages of European presence in Wabanakis there was minimal conflict. European economic pursuits were limited to a cod fishery and French trading

posts for furs. The European population was sparse and also 'The Great Dying' of 1616-1619 had taken place. During this time approximately 90% of the Wabanaki Nations perished as a result of disease epidemics introduced by Europeans (Prins, 1996).

Verbal treaties were sworn between the French, Wolastoqiyik and Mi'gmaq, but with vastly different interpretations. The French, seeing the land as being virtually empty, asked the Wolastoqiyik and Mi'gmaq to swear allegiance to their King with the understanding the land was then the property of France. It is believed the Wolastoqiyik and Mi'gmaq interpreted these verbal treaties as gestures of peace and friendship, to share the resources, as evidenced by subsequent written treaties signed with the British (Prins, 1996).

Nonetheless, with the signing of the Treaty of Utrecht, Great Britain gained control over areas of North America that France had laid claim to, including Wabanakis. Wolastoqiyik and Mi'gmaq in turn signed a series of written treaties with the British between 1726 and 1762, referred to as the Covenant Chain of Treaties as well as the Peace and Friendship Treaties. These treaties were not land cessation treaties; they were treaties to govern resource use and interactions between the First Nations and the British. Unfortunately, the terms of these treaties were not followed, resulting in the Wolastoqiyik and Mi'gmaq being sequestered onto smaller and smaller parcels of land, culminating in the present reserve structure under the Canadian government's Indian Act system (Paul, 2000).

Against this horrendous backdrop, Wolastoqiyik continued. Cultural traditions, including use of plant medicines, continued to be practiced. Elder Charles Solomon was

taught by his maternal grandmother, Mary Polches, about the medicinal plants she used to heal the Wolastoqiyik people of Pilick. He said:

> My grandmother, that is how I happened to become a medicine man. I was only about five, six years old when I used to go and help her get the medicine. She would tell me what it was good for and how to prepare it. She said the time to pick it is in the fall when the leaves are dead and all the strength is in the roots. She said that is the time to pick calamus root. So these are the things, handed right down to us (Interview, July 30, 2009).

Elder Charles was a teacher and practitioner in the use of medicinal plants. He was widely respected for this knowledge - within his community, within the Maliseet nation, throughout the province of New Brunswick and nationally in Canada. In the 1990s Elder Charles contributed to documentary films about his work with medicinal plants, including the New Brunswick Department of Education's film *Medicine Man*, which is used in the New Brunswick high school Native Studies classes. In addition, he has participated in several research projects such as SSHRC-funded *Mesq Kpihikonol* (Before the Dam), which draws on his breadth and depth of knowledge about life along the Wolastoq (Saint John River) before the construction of hydroelectric dams starting in the 1950s. Elder Charles was a key Wolastoqiyik knowledge holder with whom to work because of his affirmed recognition from within his own community as well throughout New Brunswick and Canada.

1.1.2. Development of the Research Project

Narrative and apprenticeship ethnographic research embraces the reflexive reflections of the ethnographer and makes them visible in the recording process (Cruikshank, 2000; Bruner, 1986). For this reason I will share how I came to know Elder

Charles and what encouraged me to become engaged in this research. Like Elder Charles, I grew up on the banks of a river. The Nashwaak is a tributary of the Wolastoq (the Saint John River), and lies 20 miles north of Fredericton, New Brunswick. My heritage, like that of Elder Charles, was deriving health from the land. I grew up as part of a small family farm dedicated to local healthy food through organic gardening and sustainable forestry through the stewardship of a woodlot. As a result my life is rooted in, and my endeavours protective of, this area of the world. Starting from a personal desire to foster awareness of land value and bio-diversity, my interest in medical plant knowledge grew over the years.

Elder Charles Solomon and I met in the spring of 2003, when I was working on an undergraduate course on traditional medicine systems from places around the world. The First Nations people of New Brunswick, it seemed to me at this time, must have had a traditional medicine system. From our discussions on this educational direction, my course supervisor connected me with the First Nations guidance counselor at a local high school who then connected me with Elder Charles Solomon as the person who held knowledge of medicinal plants. During my telephone discussion with Elder Charles he invited me to his home. Upon arrival I was warmly welcomed and for two hours without pause we sat in Elder Charles's front room as he told me stories about picking medicines, his experiences in the Second World War, and his work as a carpenter during the construction of the Mactaquac Dam, the dam built on the Wolastoq (Saint John River) next to his community, Pilick (Kingsclear First Nation). At the end of our visit Elder Charles handed me a long string of dried root pieces, which he called calamus root (Acorus spp.) medicine. While I found this gesture impressive at the time, after working

with Elder Charles for some time, I realized that it takes quite an effort to collect and process that amount of rhizome and the gift became much more meaningful.

In 2004, while some of my family members were posted in Bangladesh, I planned a visit there. Prior to leaving I discussed my trip with Elder Charles. He passed me calamus root to deliver to a healer who I would meet there. I did indeed meet such a healer, a *kobiras* or natural healer, and was fortunate to work with him for several weeks. When my time to learn about the healing plants of Bangladesh came to an end, the Bangladeshi healer gave me medicines to bring back to Elder Charles and he instructed me to continue my work with Elder Charles.

Since my return from Bangladesh I have visited Elder Charles regularly to hear his stories and travel with him to pick plant medicines. In 2006, during a visit on a warm summer day, Elder Charles asked me to write a book about his life, and I agreed. However, I was not sure how this request would feasibly be accomplished since I had not written a biographical book before and was not sure how to shape such an important endeavour. In 2007, I was invited to join a research project entitled Mesq Kpihikonol/Before the Dam which was documenting Wolastoqiyik life before dams were constructed on the Wolastoq (Saint John River). With my reentry into the academic world through the Department of Anthropology at University of New Brunswick the opportunity and resources to address Elder Charles' request were provided.

I worked with Elder Charles for eight years, before his passing in 2011. During the period of my full-time academic studies I continued to visit Elder Charles to learn as much as I could about his medicinal plant knowledge, garnered through vivid and reoccurring stories. Reoccurring stories, I soon learned, were part of the way in which

Elder Charles chose to pass on knowledge. So it was particularly significant that the last story he shared with me was a new one…. The last story he shared with me was a few days before his passing and it was a new one that I simply listened to. A lumber baron had created a boom across the entire Wolastoq, at Pilick, where Elder Charles' Grandparents would cross the river by boat to trade and harvest foods with the local farmers. The Elder's grandfather spoke with the lumber baron about this matter and whether the boom could be moved up river. The lumber baron refused, and the Elder's grandfather said, "You will be sorry". The next day it began to rain and it rained for several days. It rained so much that the boom was overwhelmed and the wood was displaced down river. The Elder told me this story with a chuckle and a sparkle in his eye. The Elder had previously shared stories of individuals or elements resetting a balance when a situation was out of harmony; this last story was particularly telling. My apprenticeship with him included traditional spiritual, social and emotional wisdom, which I will detail throughout this thesis. I will also link these reflections to theoretical discussions that are taking place at this time.

1.2 Theoretical Frameworks

1.2.1 Land Education

These are interesting times to be a student of anthropology. The seams of the disciple are being stretched from without and within, especially by Indigenous scholars, who are questioning the basal motivation of discussions about all dimensions of indigeneity (Tuck et al., 2014; Cruikshank, 2013; Bang et al., 2014). Indigenous

scholars, including Tuck, are amongst the leaders who are reshaping the discussion of decolonization. She posits that without a "futuring" in which Indigenous sovereignty is visualized, and the place of "settlers" (non-Indigenous colonizers) is fully understood within this Indigenous sovereign reality, the praxis of decolonization will be subverted by "settler" motivation to ensure their continued control of colonized place. Tuck et al. (2014) differentiate the western term 'place' from "land" and "Land". Place is a generic term describing location, while "land" is what would be understood in western epistemology as private property. Thirdly, capitalized "Land" comes from an Indigenous understanding of connectivity and of that from which we are created. In the context of the Wolastoqiyik, this connection to the "Land" is crystallized in their name for themselves, "People of the beautiful and bountiful river." There are in turn creation stories that detail the emergence of clans from the different animals of the river, such as the salmon clan and the turtle clan (Perley, May 16, 2008). Elder Charles identifies as a member of the turtle clan.

In 2009, before I started the academic process of formally recording specific details of our connection, Elder Charles gave me one of my most prized possessions. It is a beaded necklace, made by his daughter Cathy, which is of a red turtle with my name beaded above it. Imelda Perley (one of Elder Charles's apprentices) explained to me this symbolized me becoming a part of the family, which I remember finding shocking and amazing. I wore the necklace for several days, before asking the Elder when I should wear it. I asked him this question because it was quite delicate. He explained it should only be worn on special occasions.

The necklace given to me by Elder Charles was a beautiful gift that has made

reflect on my identity and the best way to describe my presence in Wabanakis. Tuck et al. (2014) would apply the term “settler” to my situation. I question the term “settler”, not because of its implications of taking over Indigenous lands, making them private and keeping Indigenous peoples off of them by various means, including political, economic and narrative. Rather, I question the term settler because of the reflection of my fellow apprentice Cecelia Brooks. As she posits, settler gives credence to the idea of an empty or uninhabited land (terra nullius) being colonized by people for the first time. In the case of Indigenous lands, this of course is not the case. Many peoples came to Wabanaki Traditional Territory in the past. They migrated into the sovereign territory of the Wolastoqiyik and Mi’gmaq. As immigrants to Canada do today, early French immigrants to Wabanaki Territory were expected to respect the established legal and cultural norms (Paul, 2000). Cecelia believes the adoption of language that affirms the sovereignty of Wabanaki peoples in the past is an important dimension of envisioning Indigenous sovereignty in the future. Therefore I will adopt this language when referring to myself. I am the descendent of early European (from Ireland, France, Scotland, and England) immigrants to a sovereign Indigenous territory, in what is now known as Canada.

1.2.2 Reflexive Anthropology

When I decided to pursue Elder Charles’ request to write his life story through anthropological studies at UNB, critical anthropology became an important part of the work. I learned to seek out assumptions in the writing I encountered. Did the writer make essentialist and essentialising assumptions about a culture or dualist assumptions

between cultures (Shepherd, 2010)? This training has proven fruitful in my fieldwork and subsequent analysis of my data. Like all researchers I held assumptions and blinders about my research and its implications. Through my course work I encountered the concepts of traditional ecological knowledge, Indigenous knowledge and local knowledge (Shepherd, 2010; Berkes, 2008; Usher, 2000). I subsequently referred to Elder Charles' knowledge of medicinal plants as Maliseet traditional ecological knowledge in my graduate course writings. As I delved deeper into critical anthropological theory and encountered theorists such as Abu-Lughod (1991) I came to understand and realize that by categorizing Elder Charles' knowledge as traditional Maliseet knowledge I was obscuring the dynamic nature of his knowledge and the ways his knowledge has been influenced by people and landscapes from beyond his cultural home (Appadurai, 1990). Elder Charles' interactions with people and places outside of Maliseet territory have led to a cultural hybridization of his knowledge of medicinal plants (Escobar, 1999).

In between my undergraduate and graduate studies I had the opportunity to present at the 2004 Narrative Matters conference on my experiences in Bangladesh with the healer I met there. I thoroughly enjoyed the Narrative Matters conference and the honouring of researcher's' voices I experienced at the conference. When I read Abu-Lughod's journal article *Writing against culture*, on her work with Bedouin women in Egypt, it echoed back to my experience at the Narrative Matters conference. Abu-Lughod suggests that making the researcher visible in the research, and more so, disclosing the trials and tribulations of the experience, break down the myth of researcher neutrality.

Ethnography of the particular is a reflexive theoretical approach addressing concerns of hidden power relations and exploitation within anthropological research. Abu-Lughod (1991) challenges anthropologists to avoid ethnographic descriptions that generalize the experience of either the ethnographer or the research participant. She argues that "by focusing closely on particular individuals and their changing relationships, one would necessarily subvert the most problematic connotations of culture: homogeneity, coherence, and timelessness" (Abu-Lughod, 1991:154). Ethnography of the particular differs from earlier ethnographic work in its particular attention to the power relations inherent in the research process.

Ethnography of the particular, in my case, means that my apprenticeship with Elder Charles is distinct. As a teacher and carrier of medicinal plant knowledge, he will share commonalities with other Wolastoqiyik medicinal plant knowledge carriers, but his particular experience is important because of his unique life circumstances. Equally important is my particular connection with Elder Charles and my distinct life history. I come from a privileged European descendant position within the academic world. Elder Charles chose to share his teachings with me because I went some way toward breaking the common pattern of the relations between Indigenous informant and western academic, an interaction and timeline often based primarily on knowledge transfer for publication. By staying connected with Elder Charles over many years through conversations about medicinal plants, playing cribbage, attending and inviting him to family gatherings, we developed a connection based on trust.

1.2.3 Indigenous Knowledge

Long-standing local ecological knowledge is a living system. Thus, it is only in its continued practice that it will survive and evolve (Berkes, 2008). When long-standing local ecological knowledge is acknowledged as a dynamic process, "it opens up the possibility for researchers to establish relationships with Indigenous peoples as co-producers of locally relevant knowledge" (Davidson-Hunt & O'Flaherty, 2007:293). Coproduction of knowledge, for Berkes (2008), requires collaboration and leads to cross-culturally relevant knowledge.

During my Master's course work archeologist Sue Blair shared with me a concept that she had learned through her collaborative work on *Wolastoqiyik Ajemseq* (2003) an archeological project that took place south of Fredericton near Jemseg in south western New Brunswick. The *Wolastoqiyik Ajemseq* project culminated in the publication of a two-volume set that was edited by Sue Blair and Karen Perley. Volume 1: *Important Stories and Spoken Histories* shares the stories of Wolastoqiyik Elders from the six Wolastoqiyik communities in New Brunswick as well the community in Houlton Maine. Volume 2: *Archeological Results* details the varied and rich archeological record that was recovered from the site, including a chapter (11) on paleo ethnobotany, *Micuwakonuwa Food and subsistence: Plant Remains* by Steve Monckton. The findings of *Micuwakonuwa* are further discussed in the Black Ash chapter of this thesis.

The sixth chapter of Volume 1, *Leaving the seeds for next year,* is a substantial interview with Elder Charles conducted by Alice Paul; it focuses on Elder Charles' medicinal plant knowledge, but also touches on many others subjects, including basket making, fishing, hunting and prayer. Leaving the seeds for next year refers to Elder

Charles' belief that the muskrat root rootlets (smaller roots that grow off of the main rhizome) should be replanted to ensure an ongoing supply of the medicine. *Wolastoqiyik Ajemseg Volume 1* has proven to be a very helpful manuscript, with many points affirmative to the ones I garnered during my time with Elder Charles.

Sue Blair worked closely with Wolastoqiyik colleagues during the *Wolastoqiyik Ajemseg* project and had many Wolastoqiyik cultural teachings shared with her. While I was working as a teaching assistant for one of her classes, she shared with me one of these teachings. *Weci apaciyawik* means, "so it will come back." *Weci apaciyawik* is a Wolastoqiyik saying that emphasizes the ongoing reciprocity in a given exchange.

Weci apaciyawik is a concept that is relevant to my experience with Elder Charles. When Elder Charles felt sure that I was earnest about writing his life story, he wondered when "the book" would be ready. It became clear to me that in addition to making the wisdom from his life history available to the academic world, part of my weci apaciyawik (ongoing reciprocity) was compiling a book for Elder Charles to distribute to his family, friends, and community.

Following our first interview, I passed Elder Charles the transcript of our discussion. He took it and held it crossed-armed to his chest for the rest of the visit. The great importance of returning research to those persons and communities involved in the inquiry became palpable to me in that moment. Moreover, Elder Charles at that moment had clear evidence I was beginning to do what he had asked me to do, write down his story. In that way his teachings could now reach beyond the circle of his apprentices and was secure in its physical accessibility. Berkes (2008) agrees that one of the ways that

long-standing local ecological knowledge can be furthered is by returning research to communities in an accessible form.

Long-standing local ecological knowledge, for Berkes (2008), does not accumulate in a straightforward manner, but with a growth that happens incrementally, sometimes very slowly while at other times very quickly. It is nevertheless always connected to social, economic and ecological processes. Berkes (2008) appeals for the need to see this knowledge within the holistic context in which it is created, and passed, on, from generation to generation. A disregard for the wider context of long-standing ecological knowledge, he argues, will prevent a full appreciation and beneficial understanding of the wisdom contained in these knowledge systems.

My work with Elder Charles confirmed Berkes' (2008) beliefs about long-standing local ecological knowledge. For example, as a young boy Elder Charles was taught by his grandmother about the collection of muskrat root known as *kiwhosuwasq*. Ponds located below his home community of Pilick (Kingsclear First Nation) were an easily accessible location for Elder Charles to collect kiwhosuwasq. After the construction of the Mactaquac Dam in 1954, however, the ponds were flooded and he was forced to find a new location for the collection of this plant. To do this Elder Charles used his connections from the times he had worked in Maine. A Wolastoq friend knew of a place in Maine where the medicine was abundant, easy to collect, but off the beaten track. Elder Charles then started to travel to this place annually to gather his yearly supply.

As seen in the above example, Elder Charles Solomon's knowledge of kiwhosuwasq was a living holistic understanding continually in process. His knowledge

was based on ecological knowledge shared with him by his grandmother. When the geographic basis of that knowledge was altered, it destroyed the practicality of that knowledge. Elder Charles had to then rely on a social connection he had with a fellow Wolastoqiyik to find a new location to collect the medicine. That location is also within Wolastoqiyik territory; although it involves crossing an international border into Maine and traveling by car for two hours, with all the associated complexity that creates. In the chapter on muskrat root, I detail one of my experiences of traveling to Maine with Elder Charles and the difficulties we encountered in that process.

1.3 Research Methods

In recent years the recording of oral history has regained importance and attention as a valid research method and as an accurate form of cultural knowledge transmission (Cruikshank, 2005, 2000; Yow, 2005).

Life history ethnographic research may last several years as was the case for Cruikshank (1990) in the Yukon and Henriksen (2008) in Labrador, but more characteristically happens over a number of weeks or months, as was the situation for Shostak (1982) in Botswana. In addition to semi-structured interviews with the primary interviewee, interviews with other knowledgeable persons are conducted as well as participant observation (Davies, 2008). In my case, in addition to semi-structured interviews with Elder Charles over a number of months, I also traveled with him to medicinal plant areas in both New Brunswick and Maine, and interviewed some of his other medicinal plant students.

Cruikshank (2000) found that life history ethnography was an effective research method for the documentation of the narratives of the Yukon Indigenous Elders she worked with. Stories initially told in an Elder's home lead to a trip to the places named in the narrative. Only in the place-based telling of the story did Cruikshank develop an understanding of the rich environmental knowledge that was attached to the narratives of the Elders. I have similarly found that Elder Charles Solomon became increasingly detailed in his environmental descriptions of a story when we travelled to different medicinal plant harvesting sites. I believe this is a critical juncture in apprenticeship. Non Land-based stories are often shared with acquaintances, but time on the Land is where stories become truly real, and when the responsibilities of the apprentice to carry the knowledge forward are established (Tuck et al., 2014). Moreover, a teacher's ability to travel to a site and practice a given activity may be dependent on the apprentice and the resources they bring to the connection (Kawagley, 1999).

Through my anthropological studies I have come to understand that work with Indigenous participants, especially concerning medicinal knowledge, is not a straightforward endeavour. A growing criticism has developed within Indigenous communities throughout the world regarding research by external researchers, especially concerning exploitation of medicinal knowledge (Bear-Nicholas, 2008; Bannister & Barret, 2001; Menzies, 2001). This phenomenon has obliged researchers to work more collaboratively with Indigenous communities and individuals within these communities in the design, implementation and evaluation of their research (Berkes, 2008; Davidson-Hunt & O'Flaherty, 2007).

It is with a reflexive awareness that I strove to understand and record my ethnographic narrative experience with Elder Charles Solomon. Some of the questions that guided my inquiry were: What ethical responsibility is there to protect Elder Charles' knowledge? What role can I play as a non-Wolastoqiyik person in an ethical sharing of his knowledge? Why is Elder Charles asking me, as a non-Wolastoqiyik, to record his story and knowledge of medicinal plants? His comments that have addressed these questions to date are:

> As far as the medicine is concerned, this is something as far as you are concerned. Because you are the one that has been taking a lot of time with me … Working as far as writing a book is concerned, that would be great really … This is something you and I have been working together for some time … To have somebody that will sit down and write and talk about my life, that is very, very important (Interview, May 25, 2009).

Based on Elder Charles' response, I answered these questions through a reflexive perspective on the factors that have drawn us together.

I entered our narrative intersection with an awareness of the power relations that have affected Indigenous peoples. Elder Charles entered our narrative intersection with an awareness of a time when knowledge of plant medicines was an important part of self-reliance for his community and therefore of power maintenance within his community - and also with an understanding that this important knowledge is not valued or understood by the younger Maliseet generations. Our shared interest in improved power relations and environmental sustainability through increased medicinal plant knowledge had drawn us together with a common intent.

In my literature search of historic use of medicinal plants by Maliseet people I came across several historical documents (Moerman, 2009; Erikson, 1978; Mechling,

1959). One particularly relevant effort was Mechling's (1959) work on the community of *Pilick* in the journal *Anthropologica.* In his publication Mechling names a significant number of medicinal plants that were learned from Jack Solomon, Elder Charles' uncle, at the turn of the last century. Based on these past publications I feel safe in discussing some of the common medicinal plants Elder Charles shared with me, and especially the process of collecting these plants because they have been identified previously. Furthermore, Elder Charles came back to this point many times over the years and especially during the summer of 2009. He took very seriously his grandmother's instructions that he "would be able to help a lot of people", which included both healing others and passing this wisdom on to future generations.

I found that Elder Charles' passion for the medicines translated into an equal enthusiasm for the interview process. One challenge in the process however was the fact Elder Charles had suffered major hearing loss as a result of his service in the army during the Second World War. I knew from my many visits with Elder Charles that some days he heard quite well and other days almost not at all. To avoid possible misinterpretation of my questions I developed a digital solution. I created a base set of questions on my laptop in a very large font size. The Elder would read and respond to the questions in sequence. If I had a clarifying question I would insert it below the question of inquiry. This simple solution worked remarkably well and I believe would be applicable in similar interview processes where the interview has serious hearing loss.

1.4 Discussion

From my analysis of the interview transcripts and my reflective notes, two main themes have emerged in my understanding of apprenticeship. Elder Charles mentions multiple times in every interview about the importance of getting together and working together. In the videotaped interviews, Elder Charles brings his two strong hands out in front of him and intertwines his fingers to give emphasis to his point about working together. I consider this an important part of Elder Charles' knowledge of medicinal plants since it highlights the collective nature of medicinal plant collection and processing in the past. Moreover his Land Education (Tuck et al., 2014) is grounded in two areas, the passing on of medicinal plant knowledge from teacher to apprentice(s), and the sharing of knowledge amongst the apprentice network, in order to ensure details are solidified in cross-reference.

The second theme is displacement of traditional plant medicine gathering areas due to industrialization and harvesting pressure on medicinal plant populations. Within the apprenticeship context, one could see this as the equivalent to closing classrooms or schools, and the corresponding effect of limiting the ability of Land Educators to pass on their knowledge.

My exchanges with Elder Charles Solomon and my growing knowledge of the diversity of plant medicines in this area has also deepened my sense of environmental protectiveness and a desire to help local people become more aware of Indigenous land use. Tobias (2009) chronicles the many benefits of Indigenous peoples mapping their land use, including the expansion of the educational narrative.

The narrative approach to ethnography has proven a valuable research approach for my documentation of Elder Charles Solomon's medicinal plant knowledge. A narrative of medicinal plant use is itself woven throughout his overall life story. Due to my pre-existing connection and understanding of Elder Charles' knowledge of medicinal plants I was able to explore and document some of Elder Charles' rich life history as a medicine man. A life history ethnographic approach supported the in-depth nature of my interview process over many months as well as the medicinal plant field excursions. This enabled me to garner many new details about Elder Charles' knowledge of medicinal plants.

It has been a rare and valuable experience to work with Elder Charles Solomon. I believe my compiled data of field notes, audio and video interviews portray a multi-layered picture of Wolastoqiyik Elder Charles's life as a medicine man and carrier and transmitter of medicinal plant knowledge.

1.5 Conclusion

In this introductory chapter I have endeavoured to provide an overview of my time with Elder Charles Solomon as an apprentice of his in medicinal plant knowledge. For the purposes of this thesis I have framed the discussion auto-ethnographically in order to illuminate my presence in the process. An awareness of my experience within the research project was sought with the goal of sharing the ways in which I worked with Elder Charles. I believe the lessons I garnered from my time with Elder Charles are applicable to future research endeavours with Indigenous knowledge holders. These lessons include the importance of the research process being directed and informed by the

knowledge holder or holders. In my case Elder Charles asked me to write about his life as a medicine keeper. Another lesson was the need to not rush the interview process and allow for quality informal time. Elder Charles and I played a lot of crib and drank many cups of tea before and after an interview. We never started a visit with an interview and I always waited till the timing felt right to do so.

I employed a life history ethnographic approach, with a focus on Elder Charles's medicinal plant knowledge, in order to focus the exercise on one area of particular significance to my connection with Elder Charles. As Cruikshank (1999) found with the Elders she interviewed, time on the land with Elder Charles yielded additional details about his experience with medicinal plants that did not emerge in previous sit-down interviews. It has therefore been my experience that geographically specific cultural knowledge, like Elder Charles knowledge of medicinal plants, is made more accessible when the knowledge holder has a chance to be on the land as part of the interview process.

The concept of apprenticeship is used to describe my narrative with Elder Charles. Listening, working together, ceremony and construction were all key areas of my learning process with Elder Charles. Anthropologists often form strong connections with their research participants as part of the research process. These connections sometimes take the form of a student/teacher or apprentice/Elder model. I have described the key areas of my apprenticeship with Elder Charles because I believe they could inform the way in which future researchers develop and undertake research.

I also address the developing relationship between Indigenous knowledge and western scientific knowledge. Elder Charles' Indigenous knowledge of medicinal plants

is based on a lineage of Wolastoqiyik connection and use of their territory. The depth and breadth of that knowledge is irreplaceable and invaluable. And despite trepidations, Indigenous knowledge is able to work in concert with western scientific knowledge, and in fact both systems benefit from a joint inquiry. By way of example, the toxicology study I worked on with Cecelia Brooks (chapter 2: 2.2) benefitted from the combination of Indigenous Wolastoqiyik and Mi'gmaq knowledge. Indigenous knowledge on the location and use of muskrat root was essential in order to collect samples to be tested using western scientific methods of chemical analysis.

Finally the theme of environmental contamination and habitat destruction runs through each of Elder Charles' narratives on medicine. The results of that contamination and destruction are the loss of areas for Indigenous medicine keepers, like Elder Charles, in which to collect medicine as well as to pass on the teachings of the medicines. The effects of these losses are finally being recognized in documents like the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (United Nations General Assembly, 2007), and by endorsees of that agreement including Canada. However, in order to activate the tenants of agreements on Indigenous right, including the UNDRIP, it is necessary to know what has been lost already. And the only way to understand that loss is to document the knowledge of knowledge holders, like the knowledge of Elder Charles which is documented in this thesis.

The subsequent three chapters on medicines, all follow the same format. Each chapter starts with a short ethnobotanical/botanical/medicinal description. Next I describe a medicinal plant narrative experience with Elder Charles. Then I look at the responses Elder Charles and my fellow medicinal plant students have to my questions

about the importance of each plant. Next I analyze a component of apprenticeship that I felt was a match with one of the medicinal plants, such as working together, and the corresponding theoretical conceptions that relate to this dimension of apprenticeship. Every chapter ends with an analysis of the knowledge collected during my apprenticeship experiences detailed in that chapter

The medicines described in the three chapters: muskrat root, sweetgrass, water and black ash, follow the chronology of Elder Charles teaching me about these medicines. In concert with the chronology of learning about the medicinal plants I have also followed an academic chronology. The academic process was sparked by Elder Charles asking me to a write a book about his life, which resulted in me applying to the Masters of Anthropology program. The modules and thesis composition process have encouraged me to consider the implications of what Elder Charles has taught me. I have considered these implications in two fashions. First, I have attached an element of apprenticeship that connects easily to the narrative of one of the medicines, because I found the idea of apprenticeship to be the best method to explain my time with Elder Charles. Secondly, I explore the theoretical implications that connect to the medicinal plant narratives and corresponding element of apprenticeship. I finish the thesis with a concluding chapter, where I distill all the points made in the previous chapters.

Chapter 2: *Kilhuswasq* (Muskrat Root)



*"You take like calamus root, we get that in the fall, before the frost hits the ground. And it's very, very important, because another thing that you do is have a knife when you are digging up Calamus Root. Calamus Root almost grows on top of the ground. You take the knife on each side and clear away Mother Earth, and then right on the knees, you take a knife and cut all them little roots. The reason why you do that, you're leaving the seeds like for next year, that way you don't kill the plant at all. the root..." (*Charles Solomon Sr. Interview, *Wolastoqiyik Ajemseg, p.93).*

Source: **agr.gc.ca/eng/science-and-innovation/science-publications-and-resources/resources/canadian-medicinal-crop/medicinal-crops/acorus**

Figure 3 Image of Muskrat Root

2.0 Introduction

In this root chapter I start by detailing the botanical and ethnobotanical profile of muskrat root. Muskrat root was in fact the first medicinal plant Elder Charles introduced to me, and as described in my introductory chapter I am introducing the plants in the chronological order in which I encountered them. I subsequently describe the meeting of two studies, the continuation of Cecelia Brooks' and my work with Elder Charles through a Health Canada toxicology study of muskrat root, and the ethnobotanical doctoral work of Michelle Baumflek. Next I share parts of my semi-structured interviews with Elder Charles on his connection to muskrat root and a particularly interesting experience we shared in going to collect the medicine in Maine. In the following section I discuss the dimension of apprenticeship, in this case listening, that I consider most relevant to the time I spent with Elder Charles learning about muskrat root. Finally I detail the theoretical implication I have drawn from this exploration. In this case I link my

experiences with Elder Charles and muskrat root with the evolving relationship between western scientific knowledge and Indigenous knowledge.

2.1 Muskrat Root Botany & Ethnobotany

2.1.1 Muskrat Root Botany

Muskrat Root, *Acorus americanus*, *kilhuswasq* (Wolastoq/Maliseet language meaning muskrat root) is a circumboreal member of the plant family Acoracae, an ancient family of plants known for their medicinal properties (Hinds 2000). The North American Acorus was known as *A. calamus var. americanus* and more recently as simply *Acorus americanus*. *A. americanus* can be differentiated from the introduced *A. calamus* by having multiple veins that are raised including the midvein. For *A. calamus*, only the midvein is visibly raised (Rook, 2002).

A. americanus is commonly referred to as sweetflag, sweet root, calamus root or muskrat root. *A. americanus* is a marsh/wetland plant species growing in shallow, muddy near shore environments (Rook, 2002). It is noticeable in the environment because it has yellowy-green sword-like leaves that can reach up to 4 feet high (Ravindran & Balachandran, 2004).

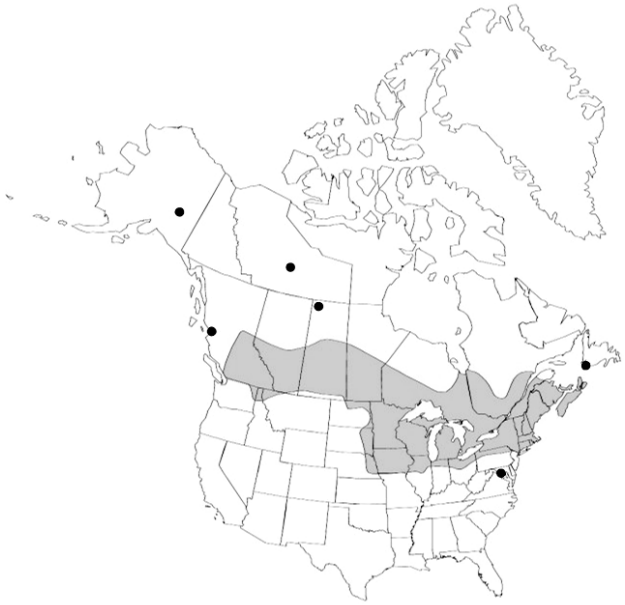


Figure 3. Distribution of *Acorus americanus,* calamus in North America (Flora of North America Editorial Committee, Eds. Flora of North America Association, 2008). Black dots represent the areas where isolated samples were collected.

2.1.2 Muskrat Root Ethnobotany

According to Moerman (2000), Indigenous peoples of North America use members of the *Acorus* genus for more than 200 different medicinal applications. There are four species of *Acorus* that grow in North America. *A. americanus* is the species that is native to New Brunswick and has been used continuously (historically and contemporarily) by New Brunswick First Nations including Wolastoqiyik (Hinds 2000).

Muskrat root is known to possess many beneficial properties as an immune system support, anti-spasmodic, carminative (prevention of gas in the gastrointestinal tract) and anthelmintic (helps to expel parasites) (Rook 2002; Ravindran and Balachandran, 2004).

Muskrat root is used as a sacred herb for spiritual journeying, due in part to a reported psychotropic effect. North American First Nations probably played a significant role in the present-day distribution of *A. americanus* because the rhizomes and plants were valued by many groups and were objects of trade (Whittemore & McClintock, 2008). Disjunct populations of *A. americanus* have been found in locations near former First Nation villages and camping areas.

The introduced species of Acorus found in New Brunswick, Acorus calamus, is an introduced species from Europe. The USDA, because of potential negative health effects, has listed Acorus calamus as toxic for human consumption (Baumflek, 2015).

The American ban was the result of lab studies that involved supplementing the diets of lab animals over a prolonged period of time with massive doses of the isolated chemical beta-asarone from the South Asian strain of calamus (Barceloux, 2008). The lab animals developed liver tumours despite the conclusion that beta-asarone is not a carcinogen. Beta-asarone is considered a procarcinogen that is neither hepatotoxic (to the liver) nor directly hepatocarcinogenic (Weisburger, 1979). It is not clear whether this compound would act the same in humans; nevertheless caution is advised when ingesting any calamus root. Acorus calamus continues to be an important part of Aryuvedic (South Asian Traditional) medicine. It is consumed in small dosages for a number of ailments (Singh et al., 2011).

2.2 The Serendipitous Meeting of Two Studies

Through the Mesq Kpihikonol (Before the Dam) project I had the opportunity to document Elder Charles' medicinal plant knowledge with a fellow apprentice of Elder Charles, Cecelia Brooks, who is a Wolastoqiyik medicinal and environmental chemist. Cecelia and I interviewed Elder Charles about his life as a medicine man and travelled with him into the field to collect medicines. Cecelia and I found that we worked together so well that summer that we have since collaborated on several projects. This has allowed us to fulfill our commitment as Elder Charles' apprentices, to care for and pass on the knowledge he shared.

Cecelia became the Water Grandmother for the Canadian Rivers Institute (CRI) based at University of New Brunswick in Fredericton, starting in 2010. As the Water Grandmother, Cecelia was asked to contribute to CRI's 2011 State of the Environment Report for the Saint John River on the topic of Indigenous Knowledge (Brooks with deMarsh in S. Kidd et al., 2011). She asked me to work with her on this chapter and to assist in presenting it at the conference that launched the report.

In the summer of 2011 we ran a medicinal plant project-based learning camp for high school students from *Sitansisk* (Saint Mary's First Nation). Here we used the traditional aboriginal education methods of observation, experience, modeling and story-telling which Elder Charles has demonstrated to us.

In the fall of 2011 we conducted a community-based toxicology study of Acorus species. This study was prompted by Cecelia's connection to the Wolastoqiyik and Mi'gmaq community members in New Brunswick, through her work as Water

Grandmother. The community members expressed their concern about pollution affecting their medicines.



Figure 4: Cecelia Brook with Muskrat Root Sample. Photo: Luke deMarsh

It turned out that an ethnobotany researcher at Cornell University, Michelle Baumflek, was completing parallel research with Wolastoqiyik and Mi'gmaq in the State of Maine (Baumflek, 2015). Michelle had discovered an interesting discrepancy through her work on Acorus spp.



A) *Acorus americanus* ***B)*** *Acorus calamus*

Figure 5: A) Acorus americanus flower B) Acorus calamus flower. Photos: Michelle Baumflek

Michelle's two photos above are from a joint presentation Cecelia Brooks and I delivered with her and Rocky Bear, of Tobique, at the Tobique Bingo Hall in September 2012. In these two photos Michelle is demonstrating the difference between the native species *Acorus americanus*, with its fully formed seeds and the Eurasian species *Acorus calamus*, which has a non-fertile seed stock. Both pictures are taken in Northern Maine; the picture of *Acorus calamus* was taken in Mars Hill at the site where Elder Charles collected muskrat root.

This joint presentation in Tobique was the result of Cecelia learning about Michelle Baumflek's research through her connections in Tobique. Michelle was working on her PhD at Cornell University in the Department of Natural Resources in the area of ethnobotany. She was continuing research she had completed with the National Forest Service on medicinal plant use in Maine, including by Native Americans. Michelle had formed a relationship with the Houlton Band of Maliseet Indians through her work at the National Forest Service and focused her PhD work on a project that the

community had requested. In this study, in addition to geophysical parameters, sociocultural parameters (interviews with medicinal plant gatherers) were used to determine where muskrat root would be found or could be re-established as part of a cultural practices continuation initiative (Baumflek et al., 2015). Baumflek's study proved to be highly effective, with an accuracy rate of 95%, in locating active muskrat root sites. This study has created a database that is secure and supportive of environmental management decision making for the Houlton Band of Maliseet Indians, as well as for First Nations individuals in New Brunswick who continue to travel to Maine and other regions of New Brunswick to collect this culturally significant medicinal plant.

One of the key findings in Michelle's PhD study was how often the two species of Acorus: *americanus and calamus* are confused. Michelle had cross referenced dozens of samples and sites and found that many sites that were assumed to be Acorus americanus were in fact Acorus calamus and vice versa. The reason she postulates for this mistake is the time of sampling. If the plant is picked too early it is impossible to know if the flower will be fertile (Acorus americanus) or infertile (Acorus calamus). Michelle had sampled the exact site in Maine from where Elder Charles had been collecting since the destruction of the site his Grandmother had shown him.

At the same time as Michelle Baumflek was making this discovery, Michelle Gray of the Canadian Rivers Institute had come to the same realization. Michelle Gray, Cecelia and I were working on the muskrat root toxicology study for Health Canada, through the Environmental Contaminants Program for First Nations. Cecelia, through her work as the Water Grandmother at the Canadian Rivers Institute, had spent the

previous year travelling around the province talking to community members in all the First Nations about their environmental interests and concerns. Concern about the safety of medicines was at the top of the list and muskrat root was at the top of the medicinal plant list. During the literature review stage of the project Michelle Gray came across the issue of the two species of Acorus as well and the concern about potential toxicity in *Acorus calamus* from the beta-asarone, as detailed above.

During our toxicology study fieldwork in the fall of 2011 we collected flowers from the site in Maine, where Elder Charles collected the plant, and found that all the flowers were in fact infertile and therefore Acorus calamus. Cecelia and I held a number of Wolastoqiyik and Mi'gmag community meetings to share the results of our research and share the recommendations we had found regarding use of the Acorus plants. We did not tell people to stop gathering from the site in Maine, but simply informed them that it contained a different constituent than is found in muskrat root. As explained above, Acorus calamus is an important plant in Aryuvedic medicine. The threads of this story, one of apprenticeship and the meeting of Indigenous and Western Medicine, will be further explored in this chapter.

2.3 Muskrat Root Apprenticeship Narratives

2.3.1 In conversation with Elder Charles

LD: Who taught you about the [plant] medicines?

CS: My grandmother and it was *so* nice the way we used to work together.



Figure 2: Elder Charles (directly behind Grandfather) with his Mother and siblings.

LD: Who was with you the first time you picked Calamus root?

CS: My grandmother was always with us when we were picking medicine. She would tell us stories too. So the medicine, oh ho boy. We didn't have to go to hospital. We didn't have to go see doctor. My father and mother, my grandmother they know the medicine, calamus root is about the best medicine you can have. We had it on the stove all the time. When it would get down, my father would put on some more water and then put fresh calamus root in – let it steep. Then we would drink it - tea. And that is why we didn't get colds.

LD: How old were you when you first collected Calamus root?

CS: Oh, I was about eight, eight years old, with my grandmother. And then she was telling me I want to show you how to pick it, how to prepare it. You will be able to help a lot of people in the future. And that is just what we did, picking calamus root and all the different types of medicine. She was telling me what it's good for. And this is one thing I helped her with everything that we had to do. Going after water for my grandfather, we would have to go down the hill. Wood, carry wood in the house. Kindling wood cut up kindling wood and put it underneath the stove.

There again as far as medicine was concerned my grandmother was, well she was a doctor really. Nobody had to go to hospital; she had all kinds of medicine. Calamus is about the best medicine we have. We all worked hard, but my grandmother picked me. And that is the reason why I became medicine man in the years afterward, helping my grandmother. And I have helped so many people. Even right today, somebody would come and I had some calamus root here all cut

up. And the girl, she asked me if I had any medicine, I said, "Yeah." She said her throat was sore and I gave her the whole package. And I told her to bring her water to a boil, and then shut the heat off and put the medicine in and let it steep for about half an hour. And all the strength is right there in that water. And I say, "You just drink it like tea," which is good.

LD: Who have you picked Calamus root with during your lifetime?

CS: Well I've taken a lot of people. I have taken a lot of people. Taken a busload from Saint Mary's [First Nation]. We went up there [Maine] and I was even telling seniors we should take a lot of young people. Cause these are the ones who can get our medicine. We don't have to work so hard we just tell them what has to be done. And I have taken people from Tobique. I have taken people from Woodstock, Saint Mary's, Oromocto.
There again when I say Oromocto, John Sacobie was a medicine man too. Him and I used to go, he's got his friend, just below Oromocto. A farmer has a pond there, but you have to have hip boots – there. Lot of calamus root grows along that pond. You had to wade right in the water to dig that medicine.
There again you could still get it from down there but you would have to see that farmer. With me, where I get it is Maine. I used to get medicine right there in Houlton. There is a little pond there. I haven't even checked it in past years. I don't know – there is so many cars, so many buildings around, probably muskrats don't stay there any more.
I had a friend of mine and when I went to prayer meeting he came up to me and he said, "Have you got anything for sore throat." And I said, "Yeah I always carry calamus root." I gave him a small piece. I said, "Chew that right up and swallow the whole thing. The next morning he said, "Boy your medicine is good. Cleared my cold right up" [chuckle]. So I helped a lot of – lot of white people too. You take years back. This is something that a lot of white people used was home remedies.

LD: Did any of your brothers or sisters pick Calamus root?

CS: Oh yeah my sister was another one, she was a medicine woman too. But my other brothers, well they just go along with us. They didn't use the medicine, calamus root. This is one thing that is handy, as far as calamus root is concerned.

LD: Your grandmother first taught you about the medicines? Who else taught you about medicines?

CS: Well my sisters were good at medicines too. This is something that we always did together is getting medicine. Oh my grandmother she was really a real doctor. Take as far as the reserve was concerned, looking after the people. Even doctor came once and that girl had pneumonia. And what the doctor did was open the window. When the doctor went away my grandmother went over [chuckle], close

> all the windows and she used her medicine and that girl came back. She was very, very happy, no more problem as far as the colds were concerned. Calamus root is very, very good. Take calamus root and sarsaparilla together. If you have a flu, it will knock the flu out in just a couple of days. You steep that together. There again the fir bows you use them crosses in your medicine. Then boil them together - well you bring your water to a boil and then shut the heat off and put in your medicine. You don't boil [chuckle] calamus root. It would be so powerful. Someone told Father Jim [laughing] that you have to boil calamus root. And that's just what he done. He had a cold coming on and he was drinking it, and drinking it. Right at the mass, right at the homily, somebody even had to give him towel he was sweating so much [laughing], but it knocked the cold right out. He got all the strength from the medicine [chuckle].

2.3.2 Medicine Trip to Maine (September 2, 2009) Journal Reflection

When I arrived at the university I discovered that the camera batteries were not charged. I decided to risk being a little late to pick up Elder Charles and have a little more battery life. I did call the Elder's house to let him know about the camera.

When I arrive at the Elders' house he is ready to go, bag packed and all tools and implements set. I will digress for a moment to note what an honour it is travel with Elder Charles on these excursions. Despite being tired this morning my heart feels good knowing what I will be doing today. Imelda (Perley), Elder Charles' senior apprentice, calls just before we arrive in Woodstock, "Neqotkuk nil (I am in Tobique)," she tells me. Her wisdom is needed for an emergency meeting. And we plan to go for medicine again next week.

The border crossing is smooth. The border guard is even friendly. When I tell him I work at the university as a researcher, he puts two and two together to realize I am studying oral history. "Mr. Solomon must have a lot of knowledge to share?" he says. "Yes," I reply. We make a brief stop at the bank and then headed upcountry. As we pass

the customs and border fleet just outside Houlton I have a feeling we may be seeing them sometime soon.

Elder Charles shows me the different farms where he had picked potatoes as a youth. This was a strong tradition for the Maliseet. He mentions that once the process became mechanized a lot of stores went out of business because of the change in migrant workers.

I miss one of the turn offs for the medicine and the Elder catches me right away. From this point on he gives me lots of notice for upcoming turns. Despite his failing vision he has an amazing sense of direction and place. Just before we arrive at the medicine patch I have a vision/fear that the police are going to visit us this afternoon. When we arrive at the patch, we stop and have lunch. I brought hummus and flat bread, which the Elder gladly shares with me. I am continuously impressed with the Elder's openness to food and experience. He is an international person in many ways.

The Elder sends me into the patch by myself, because it is too hard for him to pick medicine any more. Before I start the Elder leads us in a tobacco offering to the four directions. His smooth, water like voice is liquid prayer. The Wolastoq words are strong as rock and the tobacco feels like sacred pollen back to the mother. I turn the car around so he is pointing toward the patch and roll down the windows. Walking into the medicine patch I feel a sense of control, or as the Elder would say work is fun when you know what you are doing. I am an herbalist and the Elder is one of my senior teachers. I let my intuition guide me to the right plants. The first patch I find is wet and the black water covers me up to my elbows. The rich smells of earth and calamus fills my nostrils as I dig out the rhizomes. First you find the green stock, and then you follow the main

root, pulling up the smaller rootlets as you go. It is easy to break the root and loose it in the wet darkness, so I work slowly easing the rhizome from its warm wet home. The oils from the calamus mix in the water in a florescent swirl.

Cecelia was hoping to come today, but another commitment emerged. She asked that I find a good calamus sample for her traveling herbarium. The perfect one came from this first clump. Next I moved to another spot and found another good clump and then to a third spot. While I am picking this third patch I start to hear the sound of vehicles moving. It sounds like they are coming down the road we were on. Though we have nothing to worry about I would prefer not to deal with a concerned individual or individuals.

I finish collecting from this third patch and feel satisfied with the amount. I head back to the car and find Elder Charles snoozing comfortably. The roots are wet and muddy so I take them to a nearby stream for cleaning. The water is warm in the stream and the mud comes off easily. Again I hear the sound of vehicles moving and feel a small rush of anxiety. As soon as I finish the washing I head back to the car.



Figure 6: Elder Charles and author picking calamus root in Maine. Photo: Alex Paul

Elder Charles has woken and he is impressed with the amount I collected. "You done good Mister," he says. Everything packed up we start to head back. Almost immediately I notice a new white Chevy half ton with blue lights on top in the rear view mirror. The truck follows us for a few minutes and then the lights come on. I pull over. A well-built man with a trim black mustache and a green uniform walks toward the car. I take off my hat and sunglasses as he approaches in order to reveal an open demeanor. "Good afternoon can I see some ID?" the officer says. His badge says customs and border security. "Sure," I reply. "What does he want?" the Elder asks. "He wants to see our ID," I tell him. "No problem," the Elder says.

"What brings you to this area Mr. deMarsh?" the officer asks. "I have been coming here for many years," Elder Charles interjects. "We came to pick some roots," I reply. "Do you have permission to be on this land?" he asks. "How long have you been coming here?" I ask the Elder. "Twelve or more years," the Elder replies. "Just sit tight; I am going to run a few checks," the officer says. "Sure," I reply though of course there is nothing I can do.

My heart is beating hard and I can feel the pulse in my stomach. "We have nothing to hide," the Elder exclaims. I nod in agreement. "I dreamt about this last night. I knew were going to be stopped," the Elder reveals. Every time I look in the rear view mirror to check on the officer he is looking at us. Five minutes, ten minutes, fifteen minutes and finally the officer walks back over to the car.

"Mr. deMarsh could you step out of the car please?" the officer requests. "Sure," I say. "What is your connection to Mr. Solomon?" he asks. "I am a researcher at the university and he is the Elder I am working most closely with and he is my friend," I reply. "Are you getting paid for this time?" he asks. "It is part of my research," I reply. The officer's eyes open wide, expressing concern that yes I am working in the US. "No I am not getting paid for this time," I reply.

"Can I have a look in your trunk?" he asks. "Sure," I reply. I show the officer the calamus root and explain they are for medicine. Again his eyes open wide. "For cold and flues," I quickly qualify. "Do you have any other weapons or narcotics in the vehicle?" he asks. "No sir," I reply. "You have yourself a good day," he says as he finally closes our conversation.

I get back in the car and Elder Charles and I head off. "In twelve years of coming here I have never once been stopped before," the Elder exclaims. I drive slowly until the white Chevy with blue lights turns off toward the farmer's house. Elder Charles tells me several stories about issues he has had over the years with border officials on both sides of the border. And I am struck by the difficulty that is now involved with collecting medicine, when compared to climbing down the bank to the ponds that once existed below Pilick.

2.4 Dimension of Apprenticeship: Listening

My first lesson of apprenticeship with Elder Charles was the experience of listening. As detailed previously, I started with a visit to Elder Charles' home in Pilick where we sat in his front room for several hours while he gave me an overview of his life and especially his knowledge of medicinal plants, with special emphasis on his medicine of preference, muskrat (calamus) root.

Over the years I spent significant amounts of time listening to Elder Charles' stories about the medicines, about his experience in the war, and his life experiences generally. In many of the stories he detailed his experience of listening to his teachers as a key dimension of his understanding of a given skill. Listening, according to Cruikshank (2005, 2000, 1990) is a key factor in the ethnographic apprenticeship process. In my particular case, the importance of listening was intensified by the fact that Elder Charles was very hard of hearing. Asking questions was often difficult or would disrupt the flow of a story that was typically expressed in a congruent fashion. Similarly, Cruikshank found that instead of being provided with direct answers to specific questions

a contextual background story was often given by Angela Sidney, one of the key Yukon Elders with whom Cruikshank worked.

Moreover, Basso (1996), in *Wisdom Sits in Places*, conveys a concept that is largely ignored in Western conceptions of reality. Beyond the material dimensions of a landscape, plant, animal, and mineral, there is also knowledge. As Basso found with the Apache, being in a particular place and listening to that place would in turn elicit knowledge or wisdom. Equally so, disrespect expressed for a particular place is the same as non-acknowledgement of a fellow person. The concept of wisdom, or of stories being attached to places, and the idea that you need to both listen to the land and acknowledge a place, were a fundamental part of my apprenticeship with Elder Charles.

Elder Charles told one story in particular that highlights this teaching, one I heard many times over the years. He traveled with several of his grandchildren to Mars Hill, a spot in Maine, where he collected muskrat root later in his life. In his excitement to be collecting the medicine he forgot to offer tobacco to the land, to Mother Earth. Elder Charles and his family collected the medicine, but in the process he lost his knife. Elder Charles, who was known to be a particularly conscientious person, interpreted this loss as the "Little People"[2] playing a trick on him because he had forgotten to offer tobacco to Mother Earth before starting his collection of the medicine. The next year he returned to Mars Hill with his daughter-in-law. They offered tobacco before starting the medicine collection, and "sure enough", as the Elder would say, he found his knife. I always

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[2] "Kiwolatomuhsis: (figure in Maliseet oral tradition) little person said to help people with work secretly (e.g., overnight) and to have breath that smells like mold." (Francis & Leavitt p.950: 2008).

remember him telling the last part of the story with a chuckle. He found the knife interwoven with the rhizomes, as if the medicine had decided to grow right around his knife. This is a story he shared with me many times, and was often sparked when we travelled to Mars Hill to collect muskrat root.

Elder Charles' story of his knife being lost and found works into the concept of listening in two ways. Initially the apprentice physically accepts the story with their ears. Concentration and appreciation for this lesson is stored in one's memory. In order to ensure the memory is deeply established, the story is told and listened to over and over again. Connerton (1989) draws a parallel concept in describing the creation of collective memory. We share and reinforce collective memory through regular ritualized experience. Remembrance Day or Veterans' Day, another dimension of the Elder Charles' life, keeps an awareness of World War II in the collective consciousness. Elder Charles was a veteran of World War II and spoke of his experiences in schools and at other events associated with Nov 11th. The way in which the war is remembered, and for what present and future purposes, is a different discussion, beyond the focus of this writing endeavour. However, I use this example because remembrance of war or specific battles through ceremony and story is a universally adopted practice in the maintenance of collective remembrance. As Connerton (1989) goes on to argue, throughout history when a group or nation is overtaken or conquered by another group or nation, war memorials and associated ceremonies of the defeated nation are often suppressed in an attempt to subdue their collective remembrance and develop a new narrative. Elder Charles's resilience in the telling of his story of collecting medicine often and in many forums, his will to collect the medicine till he was 90 and his wish for the story to be

written down all illustrate his desire for his Indigenous knowledge of the medicines to be a part of the collective knowledge of his community, in the province as well as academically.

The second dimension of listening, related to my apprenticeship with Elder Charles as a carrier of plant medicine knowledge, is developing an ability to listen to the *Land* (the act of offering tobacco, as I understand it, is a signal of one's intention to interact with the Land in a respectful manner). Baumflek (2015) in her interviews with Wolastoqiyik medicine keepers in Maine and New Brunswick similarly found offering tobacco to Mother Earth was a common practice when picking medicine. As Basso (1996) suggests, respect for the land is grounded in the acknowledgement that the Land is in dialogue with us, and it is our choice to listen to what is being said or not. The risk is that when we do not listen to the Land and interact with the Land in a respectful way that the Land will convey discontent. For me, knowing Elder Charles' story of losing and finding his knife helps me remember the importance of the listening to the Land and to one's teacher.

2.5 Theoretical Implications – Indigenous Knowledge vs. Western Scientific Knowledge

Elder Charles described muskrat root as the most important medicinal plant he worked with. His stories of the use of this plant are vast and many. The theoretical implications of this particular thread of his story as a medicine man have lead me to explore the relationship between Indigenous knowledge (IK) and western scientific knowledge (WSK), as introduced in Chapter One of this thesis.

Long-standing local ecological knowledge of a particular area has been described as a living system, and therefore dynamic and ever changing and evolving (Berkes & Ross, 2013; Berkes, 2008; Davidson-Hunt & O'Flaherty, 2007). There has been much excitement and ongoing attempts to incorporate IK into Western scientific processes, including environmental impact assessments and, to a lesser extent, natural resource management (Usher, 2000). And in some cases IK has been asked to replace WSK in process applications, like natural resources management and environmental impact assessments, where Indigenous peoples have been explicitly excluded from an area, such as a National Park, for a significant length of time (Cruikshank, 2007). At the same time some First Nations have seen IK as a panacea for all ills they have faced, are facing now and will face (Cruikshank, 2000). And equally so, WSK and its methods have been demonized as being inherently flawed and incapable of helping First Nations with any of their problems. I have found the multiple dichotomies that exist in this discussion are false. As Berkes (2012) posits, IK and WSK are not at war or even incompatible, they are two types of evolving tools, like two trains travelling in parallel on two tracks. Coburn and Loving (2000) also believe IK should maintain independence from WSK. Within the discussion of science education, they are concerned that the reductionist theoretical underpinnings of WSK would overpower the spiritual dimension of IK. Coburn and Loving (2000) believe each system of knowledge carries advantages. IK is focused on connectivity amongst parts of a natural system, and amongst plants and animals, and the observance over many, many seasons of the patterns within localized natural systems, as a means of survival. WSK on the other hand is concentrated on the

compartmentalization of the parts of natural systems as a way to understand their function within the system.

Mi'gmaq Elders Albert and Murdena Marshall describe the integration of IK and WSK as Two-Eyed Seeing (Bartlett, et al., 2012). This concept acknowledges the necessity of being able to see the world from the perspective of IK and WSK, in order to address the environmental crises that we face in the world. Elder Albert Marshall, in partnership with his wife Elder Murdena Marshall and Cheryl Bartlett developed the Integrative Science program at the University of Cape Breton so Two-Eyed Seeing could be recognized in the context of academia (Bartlett, 2011).

In the story of muskrat root I have shared, the value, purpose and strengths of IK and WSK were considered with the bifocal approach of Two-eyed seeing. The species of plant Elder Charles was collecting from Mars Hill turned out to be the European species, *Acorus calamus*, which has a different set of medicinal constituents. In detailing this information to community members, through the Health Canada project, a search for new clean sites has been initiated, with a new understanding as to how to identify the plants. Medicine harvesters, including myself, have gained a new way to read the Land, and to take the knowledge we have been taught by our Elders, and use it within an ever changing landscape.

Muskrat root was the first medicinal plant Elder Charles taught me about and it continues to be a plant of significance in my life. Cecelia and I continue to harvest muskrat root in the fall. And now the next generation is developing an interest in learning about the medicine. As a result of our time with Elder Charles, and our work on the toxicology project, we are able to share that knowledge of the medicine and the

medicine itself. Both of these endeavours respect Wilson's (2008) principle of relational accountability in Indigenous research. I understand relational accountability to mean that research in an Indigenous context needs to be more than research for the sake of research. Research in an Indigenous context needs to benefit those involved in the research, or so it will come back, *weci apaciyawik.*

2.6 Conclusion

Indigenous knowledge has encountered and continues to encounter resistance to its recognition, within many domains including scientific research and public education. Indigenous scholars (Battiste, 2002; Wilson, 2008) argue that Indigenous knowledge is not being respected as a legitimate system of knowledge and is being underfunded in the educational, public policy and research milieus. A number of national and international reports, commissions and conventions, including the report of the Royal Commission on Aboriginal Peoples (Canada et al.,1996) and the United Nations Declaration on the Rights of Indigenous Peoples (UN General Assembly, 2007) also argue for the meaningful and ethical inclusion of Indigenous knowledge in public education, research and resource development.

Using muskrat root as one example, there is room for its recognition and integration into the educational context through curriculum development; room for its recognition in the public policy context through an environmental assessment process that begins with well funded Indigenous knowledge studies to inform and enhance Western scientific studies; and finally room for the recognition of muskrat root as a culturally significant medicinal plant that needs to be studied and used on an ongoing

basis to ensure the sites where it grows are being protected from physical and chemical disturbances.

Chapter 3: Sweetgrass (Wolimahuskil)



(Left Image) agr.gc.ca/eng/science-and-innovation/science-publications-and-resources/resources/canadian-medicinal-crops/medicinal-crops/hierochloe-odorata
(Right Image) seedman.com/image/rhc654.jpg

Figure 7: Images of Sweetgrass

> "Then I was even telling them, when we speak of being purified, we use sweetgrass, tobacco, cedar and sage. This is something that comes from Mother Earth. Those are the things that we use when we open our programs. We smudge ourselves and this is one thing that's so powerful that it helps us. But every meeting that we do go, there is always somebody doing the smudging. Which they should really, because it means so much to us" (Charles Solomon Sr. Interview, Wolastoqiyik Ajemseg p. 108).

3.0 Introduction

In this chapter I begin with a botanical and ethnobotanical description of sweetgrass. Sweetgrass was the second medicinal plant Elder Charles introduced to me, and as described in my introductory chapter I am presenting the plants in the sequential order in which I encountered them. Next I detail a narrative of a trip to Maine to pick sweetgrass. I subsequently share the reflections of Elder Charles on sweetgrass and the reflections of

two of my fellow apprentices on Elder Charles and sweetgrass. In the following section I discuss the concept of working together, as the dimension of apprenticeship I found to be most relevant to my experiences of picking sweetgrass with Elder Charles. Lastly I examine the theoretical implications I have gleaned from my time with Elder Charles regarding sweetgrass. Firstly, I detail the way in which Elder Charles' knowledge about sweetgrass was influenced by an extended time together and time spent in field. Secondly, the increasing difficulty in finding stands of sweetgrass raises questions about natural resource management.

3.1 Sweetgrass Botany & Ethnobotany

3.1.1 Sweetgrass Botany

Yellowish brown spikelet flowers can be found May through June. The flowering stem leaves are less than 4 cm and the basal leaves, developing in late summer, are 30 to 50 cm; dull green above and shiny below. Sweetgrass is commonly found in wet meadows and on the inner side of salt marshes (Hinds ,2000). It is found throughout the circumboreal region (Gleason & Cronquist, 1991).

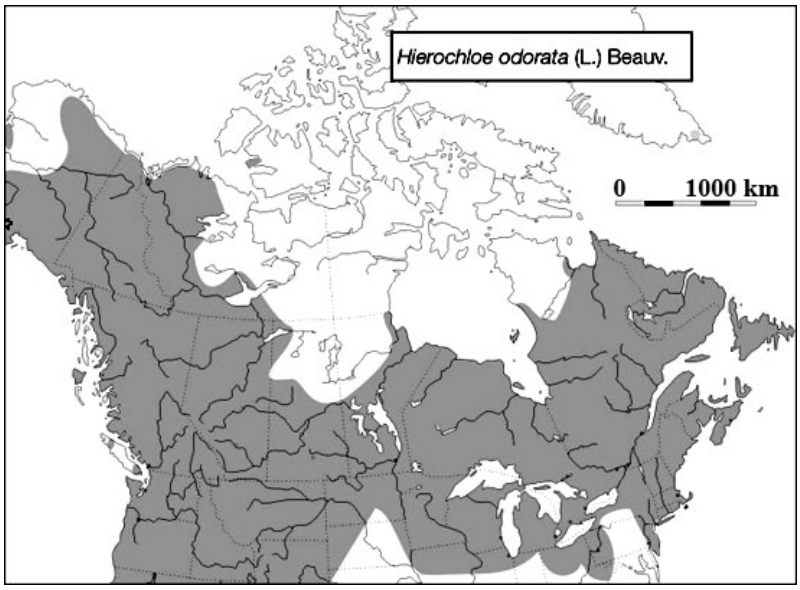


Figure 8: Map of sweetgrass range in North America. Source: http://www.agr.gc.ca

Hierochloe odorata (sweetgrass) is a member of the Poaceae (grass) family. Hierochloe, means holy grass and odorata, sweet smelling or fragrant, the sweet smelling holy grass (Hinds, 2000). Wolimahuskil, the Wolastoq word for the plant, translates as the plant that smells good (Imelda Perley, personal communication, September 15 2007).

3.1.2 Sweetgrass Ethnobotany

North American Indigenous peoples extensively burn the fragrant dried leaves for ceremonial purposes (Moerman, 2009). The dried leaves are braided and then lit to produce smoke. The smoke is then drawn over parts of the body (face, heart, torso, feet etc.) in what is called a smudging ceremony. The leaves are also incorporated into the weaving of small baskets (Hinds, 2000). Sweetgrass is scarce in many areas due to

overharvesting (Foster and Duke, 2000). As a plant associated with coastal salt marshes, sweetgrass is also facing threats from climate change and sea level rise (IUCN, 2014).

In the following narratives my fellow apprentices and I describe our experience of collecting sweetgrass with Elder Charles. The ideas of working together are woven throughout these stories liked the braids that are made from the sweetgrass.

3.2 Narratives/Apprenticeship Ethnography of Sweetgrass

3.2.1 Picking Wolimahuskil with Elder Charles

Though muskrat root was the first medicine Elder Charles shared with me, Wolimahuskil (sweetgrass) was the first medicine I picked with Elder Charles. A group of us traveled to Musquash, which is on the coast west of Saint John, in the summer of 2004. I remember there was plentiful wolimahuskil in Musquash at that time. We picked sweetgrass and sent most of it home with Elder Charles. Some of the sweetgrass would be braided for burning as a smudge; the rest would be kept loose to be added to the tops of the small black ash (Fraxinus nigra) baskets he wove.

During my field research period in the summer of 2009 I went to visit Elder Charles in early July and found him making baskets. He was almost out of sweetgrass for the rims of the baskets. We agreed to go and pick sweetgrass the following week. I called him on Tuesday to see about a time to go picking, but he had decided to go ahead to Musquash. I called him again that evening and his son relayed the message that he had found the site 'picked over' already. Elder Charles had decided not to pick any sweetgrass because it had been overharvested. The previous year colleagues from the Before the Dam project and I had traveled to Musquash to pick sweetgrass with Elder

Charles and videotape the experience. We found the site heavily picked over at that point and only picked a small amount of sweetgrass.

Elder Charles had previously mentioned *Sipayik* (Passamaquoddy community, Pleasant Point, which is south of Calais, Maine) as another possible location to pick sweetgrass. I asked Elder Charles' son to ask Elder Charles if he wanted to go to Sipayik. Elder Charles agreed and we decided to meet that Thursday morning. For this trip, BTD members Josh Taylor and Cecelia Brooks accompanied Elder Charles and me to Sipayik. Cecelia brought a flowerpot full of sweetgrass she had propagated from wild seed for Elder Charles. He responded to this gift with "alright!" which I had come to recognize as a signal of his sincere appreciation.

Elder Charles was continuously looking out the window at the scenery as we drove out of Fredericton on the Hanwell Road. "There used to be good hunting here", he would comment as we passed a certain location or "that might be a good place for medicine", as we passed another spot. Observing and listening to Elder Charles' on this trip made me aware of his deep attentiveness to the world around him.

At the border, the border guard took our passports and Elder Charles' status card. The first question the border guard asked me is how I knew Elder Charles, which took me a second to think about. "I am a student of anthropology," I told the border official "and he is a respected Elder in his community," I added. This answer satisfied the officer and we were let through quite quickly.

The day was hot and we drove with the windows down once we reached the coast. The sweet, salty air was calming after the inevitable feeling of tension at the border. Elder Charles despite his age had a keen sense of direction and memory. He knew

exactly where to turn. We stopped just before Sipayik where there is a salt marsh on either side of the road. Elder Charles knew the place well and had been coming here for many years. When he lived in Bar Harbor, Maine he would take a bus full of Penobscot Elders from Indian Island (near Orono) to pick sweetgrass in Sipayik.

Before we headed into the marsh Elder Charles led us in a tobacco offering. In this offering Elder Charles honoured the four directions and their respective gifts as well as Mother Earth and her gifts of food and medicine. The bank was quite steep so I accompanied Elder Charles down to the marsh to look for sweetgrass. Cecelia, Josh and I surveyed the area and pulled several grasses that looked quite similar (prominent mid-vein and purplish basal stems), but without the defining feature of sweetgrass, a distinct sweet smell and a shiny dark green underside to the leaf. I reported back to Elder Charles that we were not having much luck. He suggested we head into Sipayik to ask a friend of his where she would recommend picking.

It was a short drive into the community. We asked a woman walking down the street if she knew where Elder Charles' friend lived. She informed us that Elder Charles' friend had passed away and she directed us to where his friend's son lived. We drove to the house and knocked on the door. A tall man with long white hair and matching beard quietly greeted us. Elder Charles asked him the best place to get sweetgrass. He mentioned the same place we had already been as well as another spot near the ball diamond. He whispered a few words in Wolastoq/Passamaquoddy including the Passamaquoddy word for sweetgrass, *suwitokolasol*. We returned to the car. The man came to Elder Charles' window with some gifts; a fist sized pink and purple shell and an aged braid of sweetgrass.

We drove back to the baseball diamond and decided to have some lunch before we headed down into the marsh. Elder Charles' daughter Natalie had packed enough food for everyone, boiled eggs, baloney sandwiches, banana bread and ginger ale. Cecelia, Josh and I had also brought food, which we shared, creating a nice selection. With full bellies and an increasingly hot day we went to scout out the sweetgrass, which filled our nostrils but eluded our eyes. Again we were unsuccessful in finding any amount of sweetgrass.

We relayed this message to Elder Charles who thought of another person to ask in the community, who worked at the health center. On our way back to the community we came across a tall thin Passamaquoddy man in his early thirties with long black hair. He had four kids with him and they seemed to be returning to Sipayik from a long walk. I asked him if he had any suggestions of where to find sweetgrass. He mentioned the first spot we had looked as well as a couple of places just beyond Sipayik.

Elder Charles' friend at the health center also suggested the first place we had tried, but suggested we go farther into the marsh grass. We returned once again to the initial spot. The first time we had come to this spot Elder Charles' had been quite winded by the time we made it back to the car. He decided to wait in the car this time. I went ahead, while Cecelia and Josh spoke with an older Passamaquoddy woman who was walking by.

This time I was able to find a few dozen blades of sweet, fragrant sweetgrass. Cecelia and Josh also found a small number of sweetgrass blades. Josh informed me that the woman passing by told them we were too early to pick and that she thought people who picked too early were being selfish. It was a strange to see this natural/cultural

resource in such a stressed state. Similar to Musquash, this site seems to be the most popular and therefore under high pressure.

The Sipayik and Musquash sweetgrass sites are respectively located on State and Provincial Crown land and treated as open access sites. This means that anyone can go and pick sweetgrass at these sites. There is no regulation in terms of the management of the medicine. According to Berkes (2008), this type of situation often leads to what has been called 'the tragedy of the commons'. Natural resource will often become over-exploited or exhausted when there is a lack of clear boundaries and a system to enforce boundaries.

Cecelia, Josh and I presented our small harvest to Elder Charles. Elder Charles then led us in a second, closing tobacco offering. Elder Charles was clearly disappointed, so I relayed the message from the woman who thought we were too early. Back on the road, Elder Charles reminisced about the many times he had come to Sipayik to pick sweetgrass. "Even back then the sweetgrass was not tall, but there was enough for everyone." he told us.



Figure 9: Elder Charles offering tobacco at Sipayik. Photo: Josiah Taylor

When we arrived at Elder Charles' house he gifted Cecelia, Josh and myself with small ash baskets, lined with sweetgrass, he had been working on. "That was a good day," he said as we were leaving. Elder Charles' enthusiasm surprised me because the harvest in Sipayik had been poor. In further reflecting on Elder Charles' response I have come to understand there are multiple benefits to a medicine gathering session. The physical medicine is of course important, but the voyage, the sharing of food, seeing old and new people is also important and can be seen as a type of medicine.

3.2.2 Elder Charles' Reflection on Wolimahuskil

CS: We used to get sweetgrass right here [Pilick]. I can remember my mother, going down with her, on an island down here, Sugar Island. (Interview July 30, 2009)

On July 30, 2009, a couple of weeks after our excursion to pick sweetgrass in Sipayik, I completed my second interview with Elder Charles. In preparing the questions for this interview I decided to start by asking Elder Charles where his grandmother had collected sweetgrass. He stopped and thought about this question for several moments and then, like a light bulb coming on, he launched into a brand new story.

> CS: I was looking at – my grandparents, where they collected the sweetgrass. When they were in – down this side of Saint John. They used to go right in Saint John, eastside. There was a lot of sweetgrass there. I know I went with my uncle when we were down Westfield, we used to go and a lot of us. We got on the truck and went along the coast, East Saint John. And my uncle and I collected sweetgrass. Oh you could take it by the handful. We had two bunches of sweetgrass like this [outstretched arms in circle]. But now there is mill there, can't get no sweetgrass. That is why we had to go to Musquash (Interview July 30, 2009).

I had spoken with Elder Charles many times about sweetgrass and traveled with him several times to Musquash to pick it. This new detail pertaining to East Saint John excited me because to me it was a demonstration of the importance of in-depth, long-term connections with interviewees in accessing place-based knowledge (Cruikshank, 2000). Furthermore, there are many reasons knowledge takes time to emerge. I did not ask Elder Charles why he had not previously mentioned east Saint John as a traditional gathering site for sweetgrass. Listening to this interview one would hear the regret in Elder Charles' voice when he mentions the loss of this site to the 'mill'.

3.2.3 Sweetgrass Conservation

I wanted to know more about Elder Charles' thoughts on the conservation and sustainable harvest of sweetgrass. The two sites we had visited, Musquash and Sipayik were 'picked over' according to Elder Charles. Furthermore Elder Charles had relayed

the story about losing the best sweetgrass gathering site to a mill in Saint John. I asked Elder Charles on two separate occasions about the idea of planting sweetgrass or how to make sure there is enough for the future.

LD: What do you think of planting sweetgrass?

CS: Well this is one thing that we have to do is – Lots of times making sweetgrass grow there again. Well just like the seed that you brought, this is something that we have to use. Get some sweetgrass and plant it there yeah. There would be a lot of it there then. It has to be where the water comes up, where the tide comes up, that is what makes the grass grow.
There again important, these are the things that a lot of boys and girls like to do, they like to plant. Just like down here Long Island, Sugar Island, my mother used to get sweetgrass there. And it wasn't too plentiful there though. There and Saint John, Red Head they called it. Before they had that factory there. My uncle and I went and picked sweetgrass. We took two bunches like that. Pick them by the handful really. Now that is all gone. The factory is there, can't get no sweetgrass there [chuckle]. (Interview August 6, 2009)

LD: What do you think about the idea of a medicine garden?

CS: Well this would be a good idea. Medicine, garden, you could do that. (Interview May 27, 2010)

LD: How do we make sure there is enough sweetgrass for future generations?

CS: Well this is one thing we do. Just like my brothers and sisters when we used to go down there. That is all we had to do is pick enough that we want to use, that way by leaving the seed like that. Just like the medicine [calamus]. Just like the medicine when you pick calamus root, there again it is, the roots from that are the ones that you leave for like next year. This is one thing that is important to cut it off and bury the roots. Calamus root will grow. We know pretty much every year so there is a lot of medicine there. That is important really because I have taken a lot of people there. A busload from Saint Mary's we went there. And I was telling them to take young people with us to get the medicine. They're nice and strong and take a shovel and turn it up and pick the roots off. Leave there, always the little roots underneath the medicine that is what you use. Take a knife and cut it, seed is there. (Interview August 6, 2009)

LD: How do we make sure there is enough sweetgrass in the future?

CS: Oh yeah this is something as far as sweetgrass is concerned. Just as many as you pick this year, you will pick that much more next year. We used two places, different places. (Interview May 27, 2010)

Elder Charles' reflections on picking sweetgrass in Musquash and Sipayik in the past suggests to me limited use of these sites. Our recent excursions to these sites indicate an increase in their use, to a point where the sweetgrass populations have been seriously affected; which is a widespread issue (Foster and Duke. 2000). An in-depth look at the causal factors for this population decline is beyond the scope of this project, and would be a worthwhile initiative from the perspective of biological and cultural diversity (Maffi, 2004).

3.3 Reflections of Elder Charles' students on sweetgrass

3.3.1 Cecelia Brooks

Cecelia Brooks, as detailed above in this chapter and in previous chapters, was a medicinal plant student of Elder Charles'. I met her at the Fredericton Farmers Market in 2006 and we connected based on our shared interest in botanical medicine. Cecelia became a member of the BTD team in the summer of 2009 and attended and supported my interviews with Elder Charles. Cecelia's father, Wolastoqiyik from Saint Mary's, was in the military and she grew up throughout the world and went to college in Tennessee. When I asked her about meeting Elder Charles she shared the following:

CB: I have known Elder Charles for about 20 years. But I didn't meet him physically until I returned to Canada in 2006. I had this reoccurring dream. And so one weekend when I was talking to my cousin I told her about the dream. And she was talking to Charles' daughter. She said I am going to talk to my dad and tell him about the dream. So she did and a few weeks later she came back and she said that her father had told her to tell me that I should follow the path that would

take me to medicine, to continue down that path. The dream that I had it was a bear attack, but the bear attack didn't scare me. And I guess because it didn't scare me that is what scared me. I thought there was something kind of peculiar about it. It repeated itself for quite some time and then it stopped. I think when I made the conscious decision to do what Elder Charles had told me is when it stopped. That was 20 years. I really aggressively started learning as much as I could about medicinal plants from all over not just from the Maliseet tradition, all the medicines. In 06 I arrived here and I went to see his daughter and I said I want to meet your father.

LD: The next question is what is the most memorable experience of picking medicine with him?

CB: Well it would have to be that time we went down to Sipayik to get sweetgrass.

LD: Yeah that was a good time.

CB: Because that was an adventurous day with border controls and [chuckle] that was exciting. And going to peoples' houses there, knocking on doors trying to find certain people that he knew. Yeah that was probably the most memorable because realizing what a connection he had to people in Maine (Interview August 21, 2010).

When I reflected on this interview, the Elder's influence beyond the geographic boundaries of Wolastoq became clear to me. Thousands of Wolastoqiyik now live in other parts of Canada, the United States and beyond. A brain drain of traditional knowledge carriers and potential traditional knowledge carriers has been taking place for a very long time. Cecelia is just one example of a well-educated Wolastoqiyik person returning to her community because of the influence and guidance of Elder Charles.

3.3.2 Alex Paul

Alex Paul knew Elder Charles for more than 30 years. She met Elder Charles through her Grandmother-in–law, Louise (Solomon) Paul, who is Elder Charles' sister.



Figure 10: Alex with Elder Charles picking calamus root. Photo: Luke deMarsh

When I asked Alex about picking medicine with Elder Charles she shared the following.

> But we always went down to Musquash too. And the whole family would go down, all of his brothers and sisters. She [Alex's mother-in-law Louise] would always pack a picnic lunch in a split ash basket, which I still have. She would make plug, Uncle Wimp [family nickname for Elder Charles] loves plug. Do you know what plug is? [I shake my head]. It is dessert, it's what you plug your stomach with at the end of the meal. She had a really good plug, she gave me the recipe for it. Every summer we would go down and pick sweetgrass and do these other things at Musquash. There was a church there; Aunty Veronie would play the organ. We would go down and pick sweetgrass on the coast, we would go to the beach nearby for a picnic lunch, we would go off to the little island where all the kinnikinnick [bearberry] grows and it looks out over the sound. We would come back and go to slat rock beach, where all these neat flat rocks are. Sometimes Uncle Wimp would talk to the seals. But this is what we – what I would love to – I loved going on that trip with the brothers and sisters. Mim [Louise] told Uncle Wimp that after she'd gone and every one had gone, he and I still had to do that, keep that going. (Interview March 18, 2010)

Through this interview I gained a further sense of medicine picking being a part of a tradition for Elder Charles and his family. The medicine picking experience involved the cooking of special foods, singing and playing music in the little country church and generally a special time together.

3.5 Dimension of Apprenticeship: Working Together

One of the strongest memories I have from my time with Elder Charles was when he talked about the importance and power of working together. "It is *so* nice working together," he would say, as he interlaced his massive, strong fingers and extended his arms outward. As detailed below, I have come to understand that medicine for Elder Charles goes well beyond the idea of taking A to treat B; whether that be an Aspirin for a headache or muskrat root for a sore throat, or smudging with sweetgrass to create a state of calm before a meeting. The idea of disease is that one's constitution is out of alignment. Elder Charles conveyed the belief that one's' constitution is linked to both the people around you and to your local environment. Therefore the best way to rebalance or strengthen the constitution is to pick medicines together.

My apprenticeship with Elder Charles taught me that sustained time together, whether it is work or leisure, is what leads to gaining a deeper understanding of knowledge. Ethnographies have historically allowed for this time for trust to develop. In these times of 'publish or perish' it is becoming increasingly difficult to adhere to this idea, but it is nevertheless important.

Abu-Lughod (1999) in *Sentiments* describes the process of sustained experience with a group or individual as 'ethnography of the particular'. Ethnography of the

particular is about gaining depth of knowledge rather than breadth. It is a type of apprenticeship, a holistic learning experience, rather than a dissection of information for a set purpose.

Abu-Lugod was segregated within her Bedouin family's compound because of Bedouin custom. As such she spent long stretches of time with the family and especially the female members of her Bedouin family. She discovered that social scientists had visited in the past. These academics from Cairo came with long questions that her Bedouin family amusingly referred to as 'exams'. They recollected all the bizarre questions they were asked and entertaining fabrications they would develop in response to these questions. What reason would these women have to answer these questions truthfully, without prior knowledge or connection to these social scientists?

Abu-Lughod's experience makes me question the accuracy of such formulaic qualitative methods for recording the oral historical dimensions of cultural knowledge. At the same time, the semi-structured approach I used in my work with Elder Charles would not necessarily have elicited more of his memories (discussed in 2.3) about picking sweetgrass at Red Head Marsh in Saint John; moreover we did not have a chance to travel to this location before his passing, so I do not know exactly where he harvested sweetgrass at this location. These realizations lead me to search for methodologies of oral history research that are geographic in nature.

Tobias (2009) has developed a technique that he refers to as land use and occupancy studies. Tobias builds on previous anthropological work in this area, including Hugh Brody's *Maps and Dreams* (1992) and Robin Ridington's *Trail to Heaven* (1988). This methodology of recording oral history combines the fields of

anthropology, biology and geography. The narratives of land users, about hunting, fishing, gathering and camping are recorded on maps to create what Tobias (2009) refers to as 'map biographies'. The map biographies technique is combined with groundtruthing, or site visits with land users in order to verify the accuracy of knowledge recorded in the map biography sessions. If I conduct similar research in the future I would consider the land use and occupancy approach to research as a way to record knowledge in a more complete form.

3.6 Theoretical Implications

Wolimahuskil was the first medicinal plant I collected with Elder Charles. I can remember the smell and the feel of the cool salty air in Musquash. That day was the first day in the writing of this thesis, though I did not know it at the time. On that sunny July day I started to really understand the magic and the medicine of *wolimahuskil*. Once you have shared an experience with a person, a sense of trust and mutual understanding develops. When I asked Elder Charles about sweetgrass for this project he answered my questions, knowing I knew the story, could picture the places he was talking about, shared memories of these excursions. My experience resonates with Cruikshank's (2000) experience in the Yukon. Her work with Mrs. Ned and her colleagues led Cruikshank to understand their vast knowledge is not suited for direct questions, neither is it formulaic. The knowledge of these Elders is a "relational concept, more like a verb than a noun" (Cruikshank 2000:70). Their knowledge is revealed in story and practice and is not easily transferred to the abstract medium of writing.

When Elder Charles shared his story of picking sweetgrass at Red Head it enriched the current cultural geography of this place. Elder Charles' traditional knowledge of Red Head may lead to new considerations for this place. Red Head is more than its current identity as an industrial site. This land has a cultural history, a memory. If I had not had the time and space with Elder Charles would this knowledge have emerged? Keith Basso (1996) shares my sentiments, based on his linguistic work with the Apache, where he observed that hidden memories of landscape are only revealed when "we are prepared sit down and listen to our native consultants talk (Basso 1996: 68)." Conversations about landscape can uncover metaphorical dimensions of landscape. In my case the medicinal dimensions of landscape are revealed through the particular memories of Elder and medicine man Charles Solomon.

I have come to understand that there are multiple dimensions to Elder Charles' practice as a medicine person. One is the accumulation of medicinal plant knowledge for use with ailing persons. Another dimension of being a medicine person is sharing the medicinal plant knowledge with those willing to learn. What I did not fully understand until the summer of 2009 is that the gathering of people to pick medicine, the social dimension of the practice is also very important. The community of people coming together to collect medicines increased the Elder's energy during the excursions and in the telling of stories afterwards. I have similarly found that it was only through time, repeated visits, repeated excursions that I have developed a sense of Elder Charles and his family.

3.7 Conclusion

I have drawn two key conclusions from my experiences of picking sweetgrass with Elder Charles and the experiences of my fellow students, as well as Elder Charles' reflections. The first, like Abu-Lughod (1999) came to understand with the Bedouin, is understanding that Indigenous knowledge is a rich tapestry and it takes patience and care to understand the individual threads. Committing to a relational accountability (Wilson 2008) means taking time to develop trusting relationships with your Indigenous colleagues.

The second conclusion concerns natural resource management, and in this case, sweetgrass. Natural resources can become over-exploited or exhausted when there is a lack of clear boundaries or a system to enforce boundaries. This concept has been called "the tragedy of the commons", and has been used to justify managing resources under a centralized governance model or an individual private ownership model (Kagi, 2001). Saunders (2014) details the ways in which this is a false dichotomy and how common pool resource management, as it has come to be known, can be a sustainable model; it has been and continues to be practiced by many groups, including Indigenous communities. Saunders (2014) cautions those researching common pool resources or perceived common pool resources to employ strong social science methods in order to first understand the nature/social context of a particular natural resource, and the defining factors of that resource, including land tenure, power structures and cultural norms.

Chapter 4: Black Ash

> "You take like this time of the year, you know, and there again, you don't hear anybody pounding ash. It's really too bad, because we're losing that. Not only that, but as far as ash is concerned, there is so much acid rain and killing a lot of ash, right today" (Charles Solomon Sr. Interview, Wolastoqiyik Ajemseg, p. 99).

4.0 Introduction

In this chapter I will detail the medicinal dimension of black ash. Black ash, may not immediately appear to be a medicine, but I have come to understand it to be a medicine based on my time with Elder Charles and the stories he shared with me. Black ash is a plant but without medicinal constituents that are applied externally or consumed internally. As described in the Introductory Chapter, I am introducing the plants, and in this case medicines more broadly, in the chronological order in which I encountered them. I start with a botanical and ethnobotanical profile of black ash. I then detail stories of my time with Elder Charles collecting black ash and that of my fellow apprentice Terry Young. Next I explore the idea of construction as the dimension of apprenticeship most relevant to my experience of black ash with Elder Charles. Finally I address the theoretical implications of a changing landscape on the transmission of Indigenous knowledge, and where the responsibly lies with the loss or potential loss of this knowledge.

4.1 Black Ash Botany & Ethnobotany



Figure 10: Left: Black ash being split for baskets. Right: Black ash bark. Source: (wildflower.org)

4.1.1 Black Ash Botany

Black ash (Fraxinus nigra) is one of three species of ash (Genus Fraxinus) that are native to New Brunswick. These three species are our only native members of the olive family, Fraxinaceae. Black ash is found in wet bottomland, often near a watercourse (Hinds, 2000).

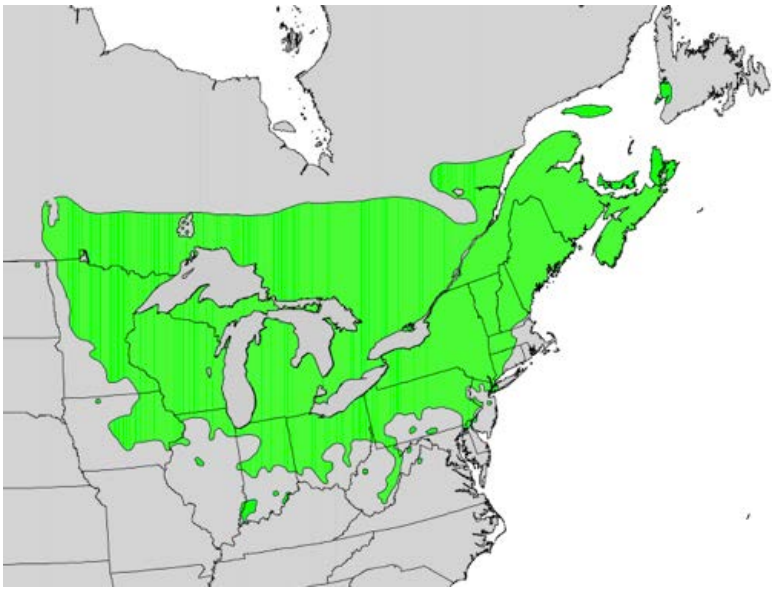


Figure 11: Distribution of Black Ash in North America (usda.com)

4.1.2 Black Ash Ethnobotany

Wikp, is the Wolastoqiyik name for the species that is known in Western scientific terms as Fraxinus nigra. *Wikp* plays an important cosmological and utilitarian role for Wolastoqiyik. In one of the Wolastoqiyik creation stories it is detailed that Glooscap, the first human figure for Wolastoqiyik, decided to test his archery skills. He shot an arrow into the trunk of four ash trees. When the arrow hit the trees the bark split open creating holes in the trees. From these holes the distinct Wabanaki nations (Wolastoqiyik, Mi'gmaq, Passamaquoddy and Penobscot) emerged (Wolastoqiyik Elder Imelda Perley, personal communication, September 21, 2009).

Black ash has also played a utilitarian role for Wolastoqiyik. A variety of baskets, ranging from small ornate (fancy), to fishing, to potato, to larger [back pack], have been used for personal use as well as for economic pursuits (Hinds, 2000). Wolastoqiyik oral

history asserts that black ash baskets have been part of their cultural tradition well before the arrival of Europeans (Blair, 2003). Due to the acidic nature of soils found in this region there does not exist specific archaeological evidence to support this assertion (Monkton, 2003).

Regardless of how long Wolastoqiyik have been making baskets, a strong tradition of black ash basket making has developed and continues to be practiced (Blair, 2003). My fellow apprentice Terry Young, who is from Pilick (Kingsclear First Nation), focused his attention on basket making with Elder Charles and he continues to make beautiful fancy baskets. In the next section I detail one of the stories Terry shared with me.

4.2 Stories of Black Ash

4.2.1 Terry Young's Story

Luke deMarsh in conversation with Imelda Perley and Terry Young:

Friday July 15th, 2011.

TY: I guess for me when I started working with him, like really working with him was probably around 94, 95. I was in high school still and he was doing the fall festival. He would come and do the spring harvest with us and the fall harvest. And he started more actively in the high school, coming there. I got to spend more time with him and you [Imelda]. You [Imelda] were with the department at that point I think.

IP: Yep.

TY: You started doing something with the project and we were filming and singing. We went up to the rock. So it started from there when I met him. I had to quit my job and I spent almost two years with him every single day. I would go up and we would go out to the back and we would get the logs and we would pound the wood. I wasn't allowed to make a basket for the first year because he wanted me to learn all the parts, how to pound the

wood and prepare it. So it has been since about 2000. I have worked with him regularly. It has been a few years …
And even in making baskets with him, in the times that we were in his little shop, he would just talk or he would sing, he would always be humming. Or he would be singing something or the radio would be on. It was just like he always used to say Indians are like monkeys. I think the idea of that is that you need that repetition. You need to learn, you need to be repetitious about it and you need to follow through with it over and over again to get it.

IP: So you can pass it on.



Figure 12: Terry with Elder Charles. Photo: Rosemary Young

TY: Exactly so it gets passed on. Because all those things he repeated with me I never forgot. I never - They never went to waste because they are there engrained in me. Because I can close my eyes and I can hear it. I can hear him saying do this and do this and do this. And he would always tell me, be direct with me and say do it like this. No, no don't do it like that because it is not going to work, do it like this. Some people take offense

> to that I guess because they want it to be a nice experience or whatever. But for him it was work. When I made my first basket he said, "There now you will never be hungry." He said, "Because if you can make a basket you will never go hungry." And it makes sense to me because that's true I can make a living off of it. If I chose to do that full time I could make a really good living.
>
> But also with it comes a responsibility of what he taught when you are making baskets. He always said the old people would sit around and they would talk and they would tell stories and the kids would be around. And even though the kids would not be actively involved they would hear the stories. They were still teaching by doing that by talking to each other about what's going on or who makes the best baskets or who does the best this. But if you listen beyond that you hear what they are actually talking about. My grandmother would do it like this or my grandmother would do it like that. Or this is the best way to do it. That was his way of telling me do it like that and it will work. Instead of saying to me do it like that. So I always had to listen between the lines with him because when he told stories it was more than what it was just about. There was an underneath to it.

4.2.2 My Story

I remember the first time I went to collect black ash with Elder Charles. I arrived at his home not knowing that this would be part of our afternoon adventures. When I arrived Elder Charles was sitting on his front porch, finishing a wood splint with his knife. This involved running the knife down the length of the splint with the sharp edge turned backwards so it works like a chisel. The rough areas of the splint are smoothed out through this process.

I just happened to have my Dad's truck that day and I could see Elder Charles' eyes light up as I approached him. "Hey," he said. "I'm almost out of ash. Do you want to go get some?" "Sure," I enthusiastically replied. The Elder had a young man working with him that day and we all piled into the truck with a couple of axes. We crossed the dam and headed toward Keswick Ridge. Elder Charles cheerfully hummed as we snaked

along side roads. He pointed out existing or former farms where his family had sold baskets to farmers in the past. He told one story of a farmer who tried to buy a set of potato baskets at a very low price from the Elder's grandfather. His grandfather agreed, but left out every second splint when he made the baskets. Apparently the farmer was carrying a couple of baskets of turnips to the barn and before he arrived was left holding only the handles of the baskets. The farmer talked to the Elder's grandfather about this, and his grandfather told the farmer, with a smile, that next time he wanted baskets he would need to pay for whole ones. We all laughed at this story that I had heard the Elder tell before. Hearing the story this time I felt much more connected to it as we drove past the place it had happened.

Finally we arrived at a swampy nook, surrounded on three sides by forested slopes. The centre of the swamp was filled with the hollow trunks of cedar trees. Around the edge of the swamp were black ash trees of various sizes. It was a cool, overcast, late fall day. The swamp looked the part of the cold, quiet weather that was just around the corner. We found a number of ash trees that were the appropriate size and started the process of cutting them down. The rhythmic thumping sound of the axe on the wood was greatly amplified in the bowl of the swamp.

An unnerving thought crossed my mind at this point. Was this private or Crown land? Either way my presence in this pursuit could potentially be problematic. I pushed the thought away and came back to the task at hand. We finished felling the trees and removed the branches. The trees were not large, the circumference of a basketball at the base and reaching just beyond the end of the truck bed, which is less than seven feet in length. We loaded the trees into the truck and headed back to the Elder's house. Again

the Elder hummed as we drove back to the house. I came in for a cup of tea and a game of crib. "That was alright," the Elder said. "I will get the young fella to pound the ash and next time you come we can make some baskets," he added.

4.3 Dimension of Wood Apprenticeship: Construction

When one thinks of an ash tree they do not immediately think of medicine. However, for me the wood from a black ash (Fraxinus nigra) tree is the quintessence of form and fortitude. When I look at the ash baskets I have made with Elder Charles, I feel all the steps and components that went into making the basket. The basket represents a direct connection to the living world and a process of meditative steps led by Elder Charles. Whereas many of the other medicines we encountered would be used up, the basket continues, often holding medicine like muskrat root, once they are prepared.

When I went to collect ash with Elder Charles we would first travel into the woods to find the ash, always near the water; black ash is also known as water ash (Hinds, 2000). We would fell the tree and pull it out of the woods. We would take the tree back to the Elder's house and pound the tree evenly with the butt of an axe. The layers of fibre in the black ash are particularly distinct and separate much more easily than other species (Hinds, 2000). Then we would cut the layers into strips, making them ready for weaving the basket. We used forms, some of which were made by Elder Charles' grandfather, to ensure the proper shape of the basket.

4.4 Theoretical Implications

In addition to medicine gathering areas being affected by the development of the Mactaquac Dam, prime black ash locations near the river were also affected. As a result, sites for collecting ash are now much farther away. This is comparable to a school being moved out of a community and the ability to access that educational opportunity being made more difficult. At the same time it is much more serious. Bang et al. (2014) conceptualizes land education as being based in cultural identity rooted in connection and practice on the land/water; this is in contrast to conceiving of place being given identity by people. The implications are that when you change the nature of the land you change its identity and its ability to be a teacher. In this case, it is the art and science of constructing black ash baskets that is being lost.

Beyond the impact on forests by industrial development, black ash is under threat from an introduced beetle called the emerald ash borer (EAB). EAB or *Agrilus planipennis* is native to China, Japan, Korea, Mongolia, the Russian Far-East, and Taiwan (Haack et al., 2015). It is believed that wood pallets introduced the EABs from Asia. EAB was first discovered in North American in 2002 on declining ash trees near Detroit, Michigan. By December of 2013 EAB was confirmed in 22 states and 2 provinces (Ontario and Quebec), but it is important to note that it usually takes several years for a mature population to develop before detection and so its actual distribution would be much farther (Haack et al., 2015).

The EAB has the potential to completely eradicate all three species of ash native to New Brunswick. This raises an important theoretical question. Is a culture tied to a specific species, like black ash, or to a changing environment? Before I met Elder Charles, he used old venetian blinds to construct a basket when he ran out of black ash. Similarly, other basket makers are now turning to new species, like Eastern cedar (*Thuja occidentalis*), to construct baskets. Continued connection to the land through innovation is an indication of the ongoing potential that needs to be seen in these challenging times (Bang et al., 2014).

There are also ethical elements at play that need to be considered. The United Nation Declaration on the Rights of Indigenous Peoples (UNDRIP) was ratified in 2007. The Harper government reluctantly endorsed the UNDRIP in 2010. And now the Trudeau government is indicating it will work to build a nation-to-nation relationship with Canada's Indigenous peoples, including recognition of the UNDRIP. Article 28 (1) of the UNDRIP states,

> "Indigenous peoples have the right to redress, by means that can include restitution or, when this is not possible, just, fair and equitable compensation, for the lands, territories and resources which they have traditionally owned or otherwise occupied or used, and which have been confiscated, taken, occupied, used or damaged without their free, prior and informed consent (p.10)."

The type of restitution or compensation that Wolastoqiyik may seek in this matter will need to be negotiated in an honourable manner that respects a nation-to-nation relationship.

4.5 Conclusion

Wikp is a species of cultural significance for Wolastoqiyik reaching back to their creation story. Black ash continues to be an important cultural species that I consider a medicine because of its ability to impart a sense of wellness in its collection and the construction of baskets. Terry details the feelings of pride and accomplishment that come with the creation of something that honours his teacher and his culture.

The future of black ash is at risk from biological and industrial factors. In order for the species, and its continued cultural significance to be maintained, clear public policy decisions will need to made in collaboration with Wolastoqiyik. These policies will include taking black ash into consideration in land use planning and environmental impacts assessments; specific funding for research on biological risks for black ash and enhanced funding for educational curriculum on the cultural practice of basket-making.

Chapter 5: Water



Figure 13: 1964 Arial Photo of Wolastoq, 10 kilometers north of Fredericton at Snowshoe Islands

(Wulustuk Time September 2009)

"Well, just like Meductic and our people are all under water, and that's not good. That's the reason why my father was even saying—just like *Koluskap* (Glooscap) has snowshoes. And he was even saying that when anybody tampers with his snowshoes, they were going to have bad luck" (Charles Solomon Sr. Interview, Wolastoqiyik Ajemseg, p. 109).

5.0 Introduction

Water is not a plant but has longstanding recognition as having medicinal properties. I became aware of the true importance of water to Elder Charles later in our connection. I begin this chapter by describing the idea of water as a medicine. Next I detail the importance of water to Indigenous peoples and specifically for Wolastoqiyik. In the subsequent section I discuss the dimension of apprenticeship I have come to associate

with water, that of ceremony. I finish by investigating the theoretical implications I have encountered with these experiences.

5.1 Water as Medicine

Water is a cleansing element, and is often the foundation of the medicines that are prepared as a tea. Moreover, time spent in the presence of water, by a river, a lake or the ocean is commonly considered a calming experience. According to the Elder, water also has feelings and must be treated with respect and appreciation. Literally every time I would share water from my family's well with the Elder he would say "samaqan wolipuksil," which means delicious water in Maliseet. I took this as a blessing and an affirmation. Elder Charles' spirit name was *Samaqan*, which is the Wolastoq word for water. I will detail one of the water ceremonies I experienced with Elder Charles below.

One writer who has been influential in the discussion of the sacredness of water is Masaru Emoto. Emoto was a Japanese doctor of traditional medicine who wrote several influential books on the power of thought on water. He claimed to have taken photos of water that were frozen after being presented with pictures, or words or music. He claimed that positive thoughts, images and music created beautiful well-formed ice crystals, while negative thoughts, images and music created misshapen ice crystals. Under scientific scrutiny it turns out that his methods are not scientifically possible. The lack of scientific rigour in Emoto's approach does not necessarily indicate that positivity does not have an effect on water, but simply that a scientifically based approach which has yet to be developed would be necessary to document this phenomenon. The popularity of Emoto's concept also indicates how respect and appreciation for water appeals to the popular

imagination. The belief behind Emoto's work always made me think of Elder Charles. Elder Charles related to all water, whether it be in a glass, coming from the sky or even frozen, with great reverence and respect.

5.2 Importance of Water to Indigenous Peoples

Scientific respect for, and affirmation of Indigenous knowledge continues to grow. Knudtson and Suzuki's book *Wisdom of the Elders* (1992) was one of the first to explore the synergies that exist between science and Indigenous ways of knowing. The Canadian River Institute's 2011 State of the Environment Report for the Saint John River is a more recent example of where Indigenous knowledge was recognized and shown to be congruent with scientific data about the river. Chapter 9, *Traditional Ecological Knowledge and the State of the Saint John River Basin*, was a collaboration between Cecelia Brooks and me.

Cecelia was asked in 2009 to give a presentation to CRI about Maliseet knowledge of Wolastoq (The Saint John River), when she was the Science Director for the Maliseet Nation Conservation Council. She presented the story of Alglabem and the Tree River. This was a story recounted to the well-known anthropologist Frank Speck by Kingsclear First Nation member Gabe Atwin in 1912. The story describes a monster frog (Alglabem) that was holding back all the water from Wolastoqiyik. Wolastoqiyik pleaded and begged Alglabem to release the water but he wouldn't. Wolastoqiyik then asked Glooscap to intervene on their behalf. Glooscap confronted Alglabem, but he still would not release the water. Glooscap then found a tree and felled the tree on to Alglabem's head. Alglabem then released the water and it flowed down in the shape of

the fallen tree, forming Wolastoq. Sue Blair illustrated this story and created a beautiful graphic that demonstrates the likeness of Wolastoq to a tree.

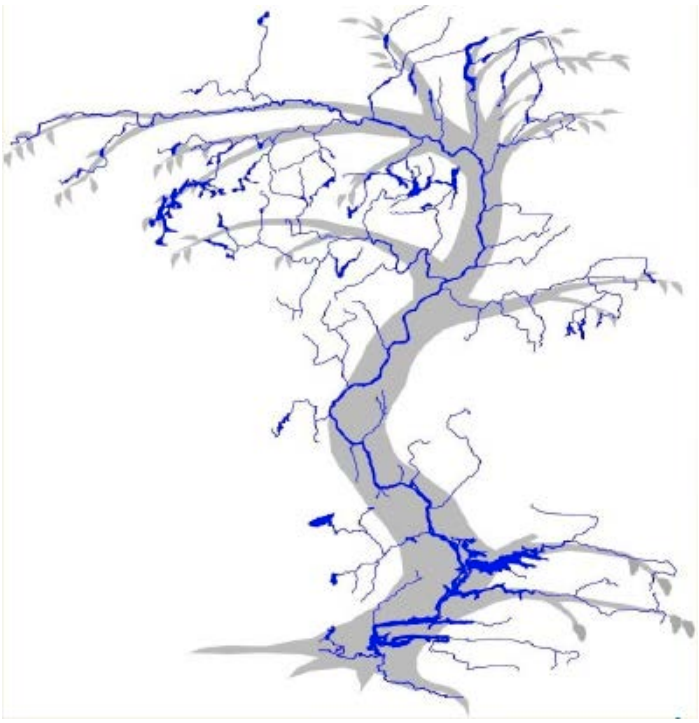


Figure 14: Tree River by Sue Blair

After Cecelia's presentation, Allen Curry, the director for CRI, approached her and asked if she had read his paper. Allen had written a paper in 2005 (Curry, 2007) about the northern shift of trout after the ice age. Using stable isotopes in nature Allen was able to determine that trout had come to what is now New Brunswick eight thousand years ago. As part of this research he discovered that there had been a debris dam at the arch of the Saint John River, near Grand Falls, that caused the river to flow north into the St. Lawrence. Eight thousand years ago that debris dam broke and the river started to flow south forming the Saint John River.

The congruence of Cecelia's story and Allen's story, one of oral tradition and the other of the western scientific method, was something they both found exciting because of the mutual affirmation. Cecelia observed that it would have been valuable for Allen to have heard the story of Alglabem before he was researching the early history of trout. Knowledge of the oral history of Wolastoq would have potentially directed Allen's research. This is an example of how oral history and western science can be combined to create synergistic understandings that will move collective knowledge forward. It is also an affirmation of the importance of water in the collective consciousness and cultural background of Wolastoqiyik, which Elder Charles manifested in his ongoing connection to Wolastoq throughout his life.

5.3 Reflections on Water

5.3.1 Elder Charles' Reflections on Water

In our conversation on May 25th, 2009 Elder Charles shares several stories about the importance of respecting water through ceremony.

> Just like smudging, there again it is important. It is going to be important. Wednesday I have to be down Fredericton, Saint Mary's. They want me to explain as far as smudging is concerned. This is why you drive away the evil spirit. Not only that, I can remember too, by smudging when the water was real high. Imelda and I went up here by the dam and we were saying prayers, we done the smudging. We asked the Great Spirit to help us; that was very, very important. After that water, there was so much water down Jemseg and when after we said the prayers the water starts coming, coming down. That is important as far as smudging is concerned … Oh yeah that is going to be very, very important. These are the things that a lot of people don't believe in. When you don't believe anything like that, it is no good for you. You have to believe the person who is doing that. These are the things that are important. Working like that, there again, the people are happy. As far as smudging is concerned, this is where we always go to the four directions. The four directions are to the north we say, we give thanks when the snow comes in the fall, that purifies the air that we

> are breathing. Then to the east where the sun comes up. Sun makes us very, very happy. That warms up the earth. We are the people of the dawn. That is important for us to see as far as the four directions are concerned. Then to the south, this is important in the fall when the rains comes, south rain comes and goes into Mother Earth. It goes into Mother Earth we are able to drink water all winter. And then to the West, this is very, very important too. That West Wind purifies the water that we are drinking, purifies the air and make you feel good. Very, very, very important as far as Mother Earth is concerned, this is where the animals use water every day just like with us … This is something that is very, very important as far as water is concerned.
> There again we all have to work together as far as that is concerned. Just like the Good Friday water we got this spring. That is important. But you have to tell the people, you have to explain to the people why. Lot of people don't even know. This is something that my father and I, years ago, we use to go down to the brook and we use to pray right there by the brook. Wash up, drink some water and take some water home with us. Anybody has cold, you give them a little water and the water that you drink will cure you. Just like a rash, the Good Friday water again is important to use, just rub yourself. This is something that is important as far as we are concerned. And we are grateful.

5.3.2 Apprenticeship Stories of Water

When I think of water and Elder Charles, the story that comes to mind is the time we went to collect holy water on Good Friday. Elder Charles started this ritual as a young boy with his father. They would rise before sunrise and walk down the road to a spring on the hill. There they would say prayers and 'wash-up' in the spring. They would also collect vessels of water from the spring and bring them back to people in the communities who were experiencing any kind of ills. This ceremony is a syncretic blend of an existing Wolastoqiyik tradition of celebrating spring and adopted Catholic celebration of Easter.

Syncretism is described as the reconciliation, or at least attempted reconciliation, of differing belief systems through one belief system subsuming another (New Webster Dictionary, 1991). Simpson's (2011) description of the syncretic relationship between

Islam and the Nile River based Nubian people parallels that of the Elder Charles' description of the Good Friday water ceremony.[3] Before the influence of Islam, the Nubian people practiced seasonally-based rain ceremonies, with prayers, singing and dancing, to encourage rains for their alluvial-based crops. In their pre-Islamic tradition the prayers were directed at river-based water angels. After the incorporation of Islam into their culture the prayers were directly at the Islamic conception of God, as he was believed to determine the extent of the rains.

Simpson (2011), notes that both Christianity and Islam recognize a non-localized idea of divinity. However, in the syncretic process both belief systems become localized and congruent with natural systems. For the Nubians, the rains needed for their fields along the Nile are still honoured. For Wolastoqiyik, the snowmelt water that returns to Wolastoq in the spring is also honoured.

The morning I went with Elder Charles, I remember waking up at 4 a.m. I met Imelda at the Elder's house at 5 a.m. The Elder was very excited for this event. He had a number of bottles on the table, ready to be filled with water. We drove down the road to the spring. Getting to the spring involved clambering down a steep embankment. Elder Charles waited in the car while Imelda and I headed down to the spring. A near full moon meant we did not need the aid of a flashlight. When we reached the spring, a fresh, crisp smell filled my nose. Standing by the spring, Imelda sang a song of offering to the

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[3] Although there are certainly stories of syncretism within other Indigenous North American nations, I have chosen an Indigenous African example here because, as Wilson (2008) posits, the presence of Indigenous knowledge is universal and the parallels in these two examples are clear.

water. We both bathed our faces in the cold spring water and collected several bottles of water to take with us.



Figure 15: Elder Charles, Imelda and author after collecting Good Friday water. Photo: Jen Thomas

Imelda had an event in Tobique that morning so needed to head out. She took several of the bottles with her for the Elders she would be visiting. I stayed with Elder Charles and we ate a big breakfast of scrambled eggs. "You know the other thing we always do at this time of year? We always go to collect red willow," the Elder proclaimed. "The reason we do this is because this is the time of the year the red willow is the reddest. My father told me that is because our Lord was whipped with it and that is his blood," the Elder added.

As soon as it was light we headed down the road again. We found a sizable patch of red willow (Cornus sericea) and I picked a large armful. We took it back to the Elders' house and started the process of stripping it. The outer bark is removed with a knife and then dried in the oven. The red willow strips curl and turn a deeper maroon as

they are dried, and produce a soothing, almost nutty aroma. Once the strips are dried they are crumbled and stored. The dried red willow, which the Elder also calls tobacco, is then smoked in a pipe or lighted in a smudge.



Figure 16: Elder Charles and author with red willow. Photo: Jen Thomas

5.4 Dimension of Water Apprenticeship: Ceremony

Water is considered sacred and is ceremonially venerated by many cultures throughout the world (Lefler, 2013). Lefler (2013), in *Water and Cherokee Healing*, discusses her personal connection to water as a child growing up in the hills of North Carolina. Many hours were spent in the creeks, swimming, exploring and fishing. She explains these experiences as a way of connecting to the Cherokee tradition. The Cherokee creation story is based in a place called Kituwah, on the Tuskasagee River, in

Western North Carolina. For this reason Cherokee historically built their homes near rivers. According to Kummu et al. (2011) 50% of the world's population lives within 3 kilometers of a freshwater body (river or lake). And despite the technological innovations that allow water to be piped long distances, only 10% of the world's population lives more than 10 kilometers from a fresh water source.

Wolastoqiyik similarly have a strong connection to water. All six Wolastoqiyik communities are based on Wolastoq (The Saint John River). Many of Elder Charles' stories are based on or near Wolastoq.

I similarly grew up on the banks of a beautiful river, the Nashwaak, a tributary of the mighty Wolastoq. My family purchased a kayak when I was 15 and I spent countless hours on and in the waters exploring the side channels and relishing the way in which the many animals, especially the ducks, would grow less and less wary of me as the summer unfolded.

Elder Charles also grew up paddling, but also poling on Wolastoq. He would paddle down to Fredericton by canoe with his father and brother with black ash baskets to sell at the Fredericton market. To return home they would pole up the river, with long wooden poles, with provisions purchased or traded at the market. From his earliest recollections/memories Elder Charles remembers the river and the respect held by his parents and grandparents for the river.

5.5 Theoretical Implications

Water, on the surface, does not appear to be a medicine. As detailed in the stories above, in my experience as an apprentice of Elder Charles', it definitely is a medicine. In order to prepare many of the medicines Elder Charles collected, including muskrat root, you must boil water to make a tea. The celebration of spring/Easter involves bathing in the water of a running spring and collecting this water for those who can no longer make it to the spring.

Tuck et al. (2014) in their/her discussion of land education, identifies the land itself as the teacher. And although Tuck et al. (2014) carries/y a critical perspective on the exploitative role of religion, she recognizes Indigenous practice, in this case ceremony, on the land and connection to the land as the foundation of land education. Olsen (2013) details how Aboriginal women in Manitoba are revitalizing cultural traditions of water worship through the honouring of pregnancy. They are drawing comparison between water protected in the womb as one's first environment to the need to protect one's second environment, including the lakes and rivers. Water is being drawn by women from their local river or lake and carried to central meeting places where stories of the importance of these locations are being shared.

When I picked medicine with Elder Charles, in addition to acknowledging his human teachers he always recognized Mother Earth and the animals as his teachers as well. He instructed me to listen to the land, the water and to the animals. This idea resonates with Kawagley's (2010) conception of a living classroom; rather than seeing the land or water as being inanimate filled with animate beings, the land and water are also alive. With this in mind, a student of the land must give an introductory greeting

(ceremony) to the land or water, listen and speak to the land or water during ones' time there and finally give a parting greeting (ceremony).

The practice of the water ceremony is one I shared with my fellow apprentices and we have continued to pursue after the passing of Elder Charles. He designed our learning experiences as apprentices to overlap and fortify each other. Elder Charles also made us aware and cognizant of environmental change and disturbance on the land. The water has changed since the time Elder Charles was a young boy. At that time you could drink water directly from Wolastoq. Moreover the building of several dams on Wolastoq, including the Mactaquac Dam, changed his relationship with the river. Many of the spots where he would go to collect medicines are now under water in the Mactaquac head pond.

NB Power, the Crown agency that is responsible for the Mactaquac Dam, has recently started a review of the existing dam structure. The dam was supposed to last 100 years, until 2067. However, they have discovered structural issues with the concrete that mean the dam will need to be replaced by 2030. Three potential solutions have been identified: to rebuild the dam as is, to remove the dam and maintain the earthen berm that directed the water into the dam or to remove both the dam and earthen berm and allow the river to return to a natural flow. First Nation engagement is factoring into this decision making process, as is the value of traditional practices and connection to the river and the land, as described in this chapter.

5.6 Conclusion

In this chapter on water I have detailed how I came to understand water as a medicine, through the teachings of Indigenous peoples in North America and Africa. I relay my story of collecting Good Friday water with Elder Charles and Elder Imelda Perley; and why ceremony is the dimension of apprenticeship that I connect to Elder Charles' teachings on water. Finally I consider water in the context of a changing landscape and how many Indigenous scholars consider ceremony on their land as the foundation of land education.

The landscape of Indigenous inclusion in industrial development processes is also changing. As a result of many Supreme Court Cases, most recently the 2014 Tsilhqot'in case in British Columbia, the bar of consultation with Indigenous peoples has risen dramatically. Where it was previously considered acceptable by Crown agencies or delegated companies to simply inform Indigenous peoples of the details of an environmental impact assessment, it is now necessary for Indigenous peoples' position on a project to be fully considered; including whether they support the project, and if so, how they see a project progressing.

In the case of the Mactaquac Dam, NB Power will need to build a strong, respectful relationship with the Indigenous peoples of New Brunswick as they determine how the project will unfold. As detailed above, Wolastoqiyik conceptions about the river, including those grounded in ceremonial practice and narrative, and which are geographically tied to specific parts of Wolastoq, will be an important part of building that relationship.

Chapter 6: Conclusion



Figure 17: Elder Charles Looking on. Source: Family Collection

"So great, you know, and it's so meaningful. This was where Imelda could explain about the meaning of the smudging. And we thank the Great Spirit, that we are getting together with our brothers and sisters and they were all in a circle. This circle again is unity, being close together with your brothers and sisters" (Charles Solomon Sr. Interview, Wolastoqiyik Ajemseg p.108).

6.0 Introduction

This thesis detailed my auto-ethnographic account as a medicinal plant apprentice of Wolastoqiyik Elder Charles Solomon - meaning I focused on personal experience as a technique for studying cultural knowledge systems (Ellis et al., 2011). In concert with an

auto-ethnographic account I employed a life history ethnographic approach in my exploration of Elder Charles' knowledge of medicinal plants. The life history ethnographic interview approach aided me in peeling back the layers of Elder Charles' knowledge to see how his present use of the land ties to his use of the land in the past and how that has changed over time (Cruikshank 2005, 2000).

Ethnography by its very nature is a narrative, as it is a way in which to record events and reflections on events. Proponents of narrative ethnography seek to reveal the ethnographer's story as part of the ethnographic account (Abu-Lughod, 1999; Bruner, 1986; Tuck et al., 2014). They believe it is better to acknowledge and detail the background and involvement of the ethnographer in the ethnographic account because the ethnographer is invariably influencing parts of the narrative. My narrative, as an apprentice of Elder Charles, started before my Masters program and has continued after his passing; with his family and my fellow apprentices.

The efficacy of apprenticeship ethnography was demonstrated through four approaches in my research with Elder Charles and my fellow apprentices: narrative/reflexive ethnographic theory (Bruner 1986, Abu-Lughod (1999, 1991), Indigenous knowledge research (Berkes 2008, Hunn et al., 2005), life history ethnography (Cruikshank, 2005), and land education (Kawagley, 1999, Tuck et al., 2014, Bang et al., 2014).

The four central chapters in this thesis adhered to the same structure. Every chapter started with a short botanical and ethnobotanical description of one of the medicine plants I collected with Elder Charles. Next I shared Elder Charles' reflections and the reflections of my fellow apprentices. Then I considered a dimension of

apprenticeship that connected to my experience with a particular medicine, such as listening with muskrat root, and the associated theoretical concept I found that linked to this dimension of apprenticeship. Each chapter finished with a discussion of the knowledge Elder Charles shared with me overall about a particular medicine and the theoretical implications I drew from this knowledge and experience.

The thesis was structured in a chronological manner in that it follows my personal narrative before meeting Elder Charles and my resulting apprenticeship with Elder Charles and associated academic investigation. A fascination with medical ethnobotany (the use of plants by people for medicinal purposes), lead to me meeting Elder Charles because of his recognition as a holder of medicinal plant knowledge. The moment I met Elder Charles our narrative of medicinal plant discussions started. The four central chapters in the thesis: muskrat root, sweetgrass, black ash and water, correspond with the order in which Elder Charles taught me about these medicines.

Elder Charles' request for me to tell his story encouraged me to seek a way to accomplish this goal. The Masters of Anthropology program became that way. The seminar component of the program pushed me to consider how I was going to undertake this effort and the threads of significance that I had already gathered. My fieldwork built upon the base created in the seminars. I followed an inductive approach with semi-structured interviews, significant amounts of downtime (participant observation) with copious cups of tea and games of crib, and a series of trips to collect medicinal plants with participation in nature-based ceremonies.

6.1 Theoretical Implications

Elder Charles Solomon was an amazing person who carried Indigenous knowledge of the medicinal use of plants and other natural elements including water and black ash. He carried on a Wolastoqiyik custom of sharing knowledge through an apprenticeship system. In this thesis I recount how I came to be one of Elder Charles' apprentices and the many teachings he shared with me during my apprenticeship. My account is enriched by the accounts of several of my fellow apprentices. The key themes of apprenticeship that I have detailed in this thesis include deep listening to one's teacher and to the *Land*; the importance of working together for maintaining a knowledge system and increasing therapeutic synergy; the power of craft to be grounding; and the importance of ceremony to stay connected to and in awe of nature.

I have sought to provide a sketch of my experience as an apprentice of Elder Charles Solomon in this thesis. The purpose of this reflexive exercise was to illuminate the process of apprenticeship in order to make it accessible to future researchers. I have learned many lessons through the research process. Key lessons include the importance of research participants in the design of the research process. In my experience, Elder Charles requested I write a book about his life as a medicine man. A further lesson was the importance of respecting the natural flow of the interview process. Each visit to see Elder Charles was a re-establishment of our rapport. As such, the first activity was often the sharing of food and a game or more of crib. And our connection did not take place in isolation. My time with Elder Charles included sharing food with his family and my fellow apprentices. Honouring the valuable connections with Elder Charles's family and my fellow apprentices further enriched my time with Elder Charles. All of theses lessons

align with Wilson's (2008) conception of relational accountability in Indigenous research. Especially in the case of non-Indigenous researchers completing Indigenous research it is critical that research process is built on a foundation of trust.

Part of honouring my connection with Elder Charles, and my fellow apprentices, was spending time on the land collecting the medicines. I found this time on the land inspired Elder Charles to share new stories, either during an excursion to collect a medicine or once we sat down again to talk about that medicine. And I am not isolated in this observation. Cruikshank (1999) and many others (Brody, 1992; Kawagley 1999; Berkes, 2008; Tobias, 2009) have observed that time on land elicits memory in a special manner. I would therefore recommend that researchers interested in understanding ecologically based cultural knowledge include time on the land with their research participants as part of the research process.

A further question I addressed is the relationship between Indigenous Knowledge and Western Scientific Knowledge. Elder Albert Marshall describes this relationship as Two-Eyed Seeing, an approach that honours the vision provided by IK and WSK. Berkes (2008) describes that relationship as being like two trains travelling on parallel tracks next to one another. These theories have resonated with my experience of working with Elder Charles. His knowledge of where the medicines grow has informed studies like the toxicology study Cecelia Brooks and I worked on with Michelle Gray. Moving forward I believe joint research approaches that respect the mutually beneficial nature of Indigenous knowledge and western scientific knowledge will be advantageous.

Lastly the pattern of environmental contamination and habitat destruction I have documented in each of the medicines Elder Charles describes is more than a point to be

noted with despair and resignation. Losing places with Indigenous cultural significance, like Red Head Marsh for sweetgrass, is in contravention of the commitments Canada has made as an endorsee of the United Nations Declaration on the Rights of Indigenous Peoples. But in order to understand what has been lost, or may be lost by future industrial development, it is first necessary to document Indigenous Knowledge, like I have documented Elder Charles's Indigenous Knowledge of medicines in this thesis.

6.2 Conclusion

6.2.1 Policy Potentials

There are two key Indigenous policy documents that have come into the Canadian political policy spot light in 2016. Internationally it is the The United Nation's Declaration on the Rights of Indigenous Peoples (UNDRIP) (2007); federally it is the Truth and Reconciliation Committee's Calls to Action (TRC CTA) (2015).

The UNDRIP is mentioned several times in this thesis as a guiding document on Indigenous Rights. And although the UNDRIP was drafted in 2007, it was not ratified by the Canadian Government under Stephen Harper. Only after considerable pressure was it endorsed by the Harper Government in 2009. Fortunately, there are some promising signals from the current Prime Minister, Justin Trudeau, that the UNDRIP will be followed to a degree.

The TRC CTA was released in 2015. These 94 calls to action represent the key areas determined by the TRC as needed to start the process of reconciliation in Canada between Indigenous Peoples and non-Indigenous Peoples; as a result of the colonialism, and neo-colonial policies, in particular the residential school system. The CTA outlines

changes needed for governments at municipal, provincial and federal levels; for churches; and for education systems, from primary through post-secondary and professional.

In response to the UNDRIP and the TRC CTA, major funding pledges have been made by the Trudeau Government toward improving First Nation education and making it more culturally appropriate. And major changes have been promised to the processes of the Canadian Environmental Assessment Agency (CEAA) and the National Energy Board (NEB), in order to ensure more meaningful inclusion of First Nation Peoples in natural resource decision making.

6.2.2 Environmental Policy Potential

The UNDRIP is particularly focused on changes that need to take place in the realm of government environmental policy. For example, Article 29 (1) of the UNDRIP states:

"1. Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands or territories and resources. States shall establish and implement assistance programs for Indigenous peoples for such conservation and protection, without discrimination."

In order to determine how Indigenous Peoples want their lands conserved and protected it is necessary to first determine the boundaries of their land use and occupancy and how they are using those lands.

Indigenous land use and occupancy studies, or traditional land use studies, have become a standard component of CEAA's environmental impact process, the NEB's pipeline review process and provincial environmental impact assessments; including those in New Brunswick.

Based on a series of missteps, including the Supreme Court's rejection of the NEB's consultation process with Indigenous people on the Northern Gateway Pipeline, and the Indigenous-led shale gas protests that took place in Kent County, New Brunswick, additional and earlier funding is being offered to Indigenous peoples to participate in environmental review processes in their respective territories (McIvor, 2016).

This thesis has addressed some of the methodological considerations that are needed for Indigenous knowledge studies that will take place as part of environmental review processes. These considerations include building a trusting relationship with your research participants, that includes informal time for activities such as tea and cards. Equally important is spending time on the land with your research participants, to elicit land based memories to complement sit-down interviews.

6.2.3 Education Policy Potential

The TRC CTA includes language regarding changes needed to education policy to reflect Indigenous history and Indigenous knowledge. These include:

i. **62 (ii)** Provide the necessary funding to post-secondary institutions to educate teachers on how to integrate Indigenous knowledge and teaching methods into classrooms.

ii. **62 (iii)** Provide the necessary funding to Aboriginal schools to utilize Indigenous knowledge and teaching methods in classrooms.

I believe this thesis offers preliminary suggestions on how education systems can be made more culturally relevant through the inclusion of Land-based education. Examples of Land-based education include learning about cultural traditions such as the use of plants for food, construction and medicines.

Moreover, in order to break down the barriers of ignorance and racism that exist against Indigenous Peoples and that continue to plague this province and nation, cultural practices of Wolastoqiyik need to be shared in a meaningful way with non-Indigenous students.

6.2.4 Moving Forward

The time I had with Elder Charles Solomon was an absolute gift. He invited me into his life as a Medicine Man. He shared with me the healing power of plants, water, and people when they work together. His profound relationship with the Wolastoq (the Saint John River) watershed was embodied in a plethora of stories that he recited with vigour and precision, and a vitality to keep picking medicine right up to the end of his life.

Elder Charles relayed two key dreams for the future in our time together. He hoped that the young people would come to appreciate the importance and power of the medicines. He also hoped that society in general would start to acknowledge and respect Wolastoq. I believe that time is starting and I am humbled to support the fruition of Elder Charles' dreams.

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Conference Presentations:

2012 Delegate and co-presentation with Cecelia Brooks at the International Polar Year Conference in Montreal, *Indigenous Knowledge Exchange program, Food Security and Health: Reducing Contaminant Inputs into the Polar Environment through integration of Scientific Knowledge with Indigenous Knowledge and Values.*

2011 American Anthropology Association annual conference presentation with Dr. Evelyn Plaice, *Ways of Knowing: Aboriginal Environmental Apprenticing in the 21st Century*.

2010 Narrative Matters Conference presentation: *Maliseet Medicine Man: A Life Narrative Ethnography*. Fredericton, New Brunswick.