

Traditional Ecological Knowledge and New Brunswick's Forest: A Conversation

Chantal Gagnon and Tracy Glynn



Conservation Council *of* New Brunswick
Conseil de conservation *du* Nouveau-Brunswick

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Introduction

Traditional ecological knowledge is knowledge gained through interactions between humans and their environments over millennia. Traditional ecological knowledge is inherently adaptive and in constant evolution as it comes from human adaptation to its surroundings. An intimate sense of respect for nature in its diversity is a vital component of the knowledge shared with each new generation. Traditional ecological knowledge changes through time, but not its basic elements of respect, observation, regular interaction, innovation and sharing.

“Traditional ecological knowledge (TEK) represents experience acquired over thousands of years of direct human contact with the environment. Although the term TEK came into widespread use in the 1980s, the practice of TEK is as old as ancient hunter-gatherer cultures.” – Fikret Berkes, author, *Sacred Ecology: Traditional Ecological Knowledge and Resource Management*.

Traditional ecological knowledge is still an important factor in our society, especially for those who interact daily with our natural environment, such as foresters, farmers, hunters, fishers, conservationists, naturalists and First Nations. It is found often in our older generations. However, traditional ecological knowledge is rarely used in the decision-making processes of our society.

Traditional ecological knowledge is dependant on a regular relation with other beings and Earth’s natural systems. As Earth’s natural systems are changing and being degraded rapidly by humans for short-term profits, so too is traditional ecological knowledge. Today, traditional ecological knowledge is still present but

silenced by our institutions, isolating it from the realities of decision-making.

For centuries the Wolastoqiyik (Maliseet), Mi’kmaq, Passamaquoddy and Penobscot people lived and thrived in this region relying on their traditional ecological knowledge. European settlers to the region came to know their new natural surroundings in order to survive, aided by the knowledge shared by First Nations. They passed on that understanding to future generations. Many cultural, political, social and economic decisions were made based on this traditional or local knowledge. Afraid of the exploitation that has occurred over the centuries through misappropriation, traditional knowledge keepers have learned to guard it from abuse. Yet, carefully sharing the knowledge for the well being of all is essential to future generations.

This project is one of many regional efforts by non-governmental organisations and traditional knowledge keepers to ensure this knowledge regains a place of importance in informing our decisions and is not lost for future generations.

The Acadian forest is a meeting place where the northern evergreen boreal forest blends with southern leafy hardwood forests. “Acadian forest” was the name given to the mixed forest found in the Maritimes, Quebec and northeast U.S. by forest ecologist Stan Rowe in 1972. There are 32 native tree species in the Acadian forest.

The current state of what we referred to as “Acadian forest” today and the challenges that await us because of climate change make it necessary for our decision makers to revisit the importance and place of traditional ecological

knowledge in decisions that affect our forest.

This report provides a voice for some of the knowledge keepers of our forest. The project as a whole provided a means to assist local efforts to bring together those interested in seeing the Acadian forest and traditional ecological knowledge restored.

In the spirit of decolonization and justice, protecting the forest of our region must involve processes of reclamation of traditional knowledge and culture, and reassertion of the original inhabitants of this land as a distinct identity. Decisions regarding the Acadian Forest must respect treaty rights and recognise that the lands of the province of New Brunswick were never ceded to the British Crown by the First Nations. These processes are necessary for the appropriate integration of traditional ecological knowledge in decision making.



The mixed wood forest of New Brunswick in autumn.

The project

The first step in this project was to join an existing effort by other not-for-profit local groups to bring together individuals including natives and non-natives for a conversation on conservation. On February 26, 2009, the Conservation Council of New Brunswick, the Schoodic Band of the Passamaquoddy Nation of St. Andrew's, the Southern Gulf of St. Lawrence Coalition on Sustainability and the Bay of Fundy Ecosystem Partnership (BoFep) hosted a talking circle on conservation and cooperation at St. Thomas University in Fredericton, New Brunswick.

A commonality shared by all participants at the talking circle was a relationship of friendship with Chief Hugh Akagi of the Schoodic Band of the Passamaquoddy; either directly or through his friends. This permitted the conversations, even sensitive ones, to be held in respect and recognition of our mutual friendship. Participants came from all the Maritime provinces and Maine.

One of the outcomes of the talking circle was increased awareness of the realities, concerns and perspectives of the First Nations in regards to conservation and relations with non-natives. Another outcome was the creation of a video by BoFep of the talking circle for educational purposes. The talking circle facilitated the creation of new relations, which were of use in accomplishing the second part of this project.

The second part of the project was to hold conversations through an informal interview process with traditional forest knowledge keepers in different parts of New Brunswick. The goal of each interview was to identify what, according to their perspective and experience, are the challenges to the health of the

Acadian forest and its species; how traditional ecological knowledge could be applied in our efforts to ensure a healthy forest for future generations, and how traditional ecological knowledge can be protected from abuse in New Brunswick.



Hobblebush. Courtesy: Cecelia Brooks.

Participation in this project was voluntary. Those receiving the knowledge shared met the participants in their chosen location and respected each of their comfort level of participation. They were given the option of participating individually or in small groups. The knowledge keepers were given the choice of including their name or remaining anonymous in this report. The report attempts to capture the thoughts and insights of the knowledge keepers as it relates to ensuring healthy natural forests for future generations. This report has been shared with all participants to ensure the content is accurate and approved by all.

An accompanying poster to this report will capture, in quotes and pictures, the main themes of the conversations. The poster, in English, French, Maliseet and Mi'kmaq, will be distributed to First Nation centres, schools, government departments and agencies and the wider public throughout the province in 2009 and 2010.

Names and profiles of knowledge keepers

Bill McKay (BM) is the coordinator of Nagaya – a high-level forest certifying body. He lives and works on his woodlot in Dieppe. The conversation with Bill was held outdoors in his Nagaya-certified woodlot in Dieppe.

Dennis Simon (DS) is Mi'kmaq and is the forestry director of the Elsipogtog First Nation. The conversation with Dennis was held at the new forestry office at Elsipogtog.

Cecelia Brooks (CB) is Maliseet from the St. Mary's First Nation. She is the science director of the Maliseet Nation Conservation Council. The conversation with Cecelia occurred in Fredericton at the Conservation Council of New Brunswick office.

Jean-Guy Comeau (JGC) is an Acadian woodlot owner and retired mill worker from Miramichi. The conversation with Jean-Guy occurred in Fredericton at the Conservation Council of New Brunswick office.

Michael Paul (MP) is Maliseet from the Woodstock First Nation. He has experience working with many non-profits as an aboriginal advisor. The conversation with Michael occurred outside along the Wulustuk River (St. John River) shore at Woodstock First Nation.

Dan Ennis (DE) is Maliseet from the Tobique First Nation. Dan is the Grand Chief of the Wulustukyeg Traditional Council of Tobic and is active with the Maliseet Advocacy Council. The conversation with Dan occurred with Pat Paul at Pat's house in Tobique.

Pat Paul (PP) is Maliseet and from the Tobique First Nation. Pat is the sub-chief of the Wulustukyeg Traditional Council of Tobic and editor of The Wulustuk Times. The conversation with Pat occurred with Dan Ennis at Pat's house in Tobique.

The participants are identified in the text by the use of their initials prior to the summarized versions of their statements.



Highbush cranberry. Courtesy: Cecelia Brooks.

Questions that guided the conversation

All project participants, except two, were interviewed individually. The interviews were informal, and the questions served as guides to the conversation. The participants were asked the eight questions below in the order in which they appear. If the participants raised points that were of further interest, the interviewers asked other questions to deepen the conversation. Participants were given a small hand-made token of appreciation for their contribution to this project.

1. When you walk in the forest you know best, what changes can you observe today in the trees, animals, lands, waters and air from when you first walked in that forest?
 - 1.1. Are there any particular changes that concern you? Please describe.
 - 1.2. Why do these changes concern you?
2. When you visit other forests in the region, what do you observe as being different (in terms of the trees, animals, lands, waters and air) than the forest you know best?
 - 2.1. Are these differences a concern to you?
 - 2.2. Why do these differences concern you? (Or if it is not a concern, is there something to be learned from these differences?)
3. Is there a particular human activity (action or characteristic) happening in the forest you know best that from your experience is having a negative impact on the forest?

3.1. Can you explain how or why that activity is having that effect from your observations and experience (i.e. is it just bad practices and government policies, is it the activity as a whole or is it the mindset of people?)

4. Based on what you know of the forest, which in our work we call traditional ecological knowledge, is there a forest species in particular that you would want us to emphasise in our work to make sure it is present and healthy for many generations?

4.1. Can you share with us why this species is important for you, your people and future generations? You can name more than one if you like.

5. How do you feel traditional ecological knowledge should be included in how people and the government treat the forest and its species (i.e. manage our activities)?

6. How would you describe the existing relationship between traditional ecological knowledge and western-based science when it comes to ensuring a healthy forest for many generations?

6.1. What do you see in the future for this relationship?

6.2. What are the steps to take towards that relationship?

7. What threats exist to sharing traditional ecological knowledge of the forest with those who do not have this knowledge?

7.1. How can these threats be avoided?

8. Any further comments?

Many Conversations, Similar Messages

The reward of holding an in-person conversation is the seed that is planted for a relationship, or the germination of a relationship seed that was planted previously. Traditional knowledge keepers appreciate inquisitive minds. Be it while walking in the woods or sitting at a table with a hot cup of tea, an in-person conversation permits those present to respond to both the verbal and non-verbal aspects of the conversation. It is therefore easier for the traditional knowledge keeper to determine the authenticity of the person with whom they are sharing their knowledge. More can be gained from such conversations and relationship building.

Traditional knowledge keepers have the responsibility of both protecting and sharing the knowledge. This is a duty that can be difficult, but can also be rewarding when the listeners understand, respect and are willing to learn and unlearn. The participants' expression of trust is appreciated, and hopefully this report does the conversations justice.

The following sections relate to the guiding questions of the conversations and include the insights expressed by each participant.

Living memory and current state of our forest

BM: Forest health has deteriorated significantly. Quality and height has been affected. The Acadian forest is mostly 40 to 45 feet high when it should be 80 to 110 feet high. When height is reduced so is volume. Lichen needs trees that are 80 to 125 years old – they need that

substrate to grow. We probably have lost species that we don't even know existed here. We know we have lost nitrogen fixers as it takes them a century to get underway. We do not know what the consequences are of the loss of these species. The species mix has also changed. There are more balsam fir, red maple and white birch, and less sugar maple and hemlock. With the advent of Genetically Modified Organisms (GMOs), original genetic material is being lost.

JGC: Older forests are rare now compared to when I was a kid. Trees are not as old. Yellow birch (30 to 40 inches in diameter) was used in the keels of the big fish vessels in Caraquet but you would never find that today. Hemlock (3-4 feet at the base) was used for fishing wharves in New Brunswick, Prince Edward Island and Nova Scotia. Hemlocks last longer in water than some other trees. Wharves are made out of concrete and steel now.

We are losing our Acadian forest – the variety of species and abundance. Today, we can't find many species in enough abundance to use. Also the extent of forest fragmentation and the proportion of tree species remaining on the landscape do not allow for full recovery. We can't find a birch tree big enough to make a canoe or a basket.



Wood sorrel. Courtesy: Cecelia Brooks.

DS: There are more clearcuts and bigger clearcuts. The natural environment is gone with a clearcut. The colour of waters in streams and rivers is also changing due to nearby clearcuts. We see more silt entering waterways during spring runoff caused by roads. Culverts don't stop all silt/runoff. Alternatives to clearcuts exist and should be considered. Current policies on Crown lands force aboriginal communities to clearcut. The aboriginal way of harvesting forest is different – it leaves more behind. Today, there are violations and fines if you leave too much behind. Input from Aboriginals is not considered in policies or decision-making processes. We must follow rules in the Crown Lands and Forests Act. There would be no clearcutting if Aboriginals had their way. Things changed with colonialism when Aboriginals became traders and labourers. Aboriginal people are abused. Forests are overcut.

CB: One has to go further into the forest to actually be in a forest today. The noises of human activities bother me. There is not much wildlife. There are not as many butterflies. There is more open space on the reservations now.

“Things changed with colonialism when Aboriginals became traders and labourers. Aboriginal people are abused. Forests are overcut.” - Dennis Simon.

PP: There are less animals and less diversity of animals like birds – ospreys and hawks. The changes concern all of us. Forest Watch in Tobique started four years ago because of these concerns. Animals, fish and bugs are disappearing with the trees. The land is being washed away into the brooks and rivers.

“Older forests are rare now compared to when I was a kid. Trees are not as old. Yellow birch was used to make boats for fishermen in Caraquet but you would never find that today.”

– Jean-Guy Comeau.

MP: There are more sicknesses in trees today.



Old growth forest in New Brunswick.

Differences between the forests

BM: We as humans are a product of our experience. Our own experience shapes our perception. Our perception is unique. Each of us tastes, sees, hears and lives differently. Every time I walk in the forest, it is always changed, from weather to weather, season to season, depending on the time of month or how I feel. The attitude I bring with me in the forest will shape how I feel and what I'll observe and experience. Walking in the forest is like going on a treasure hunt. My mind can't fathom all the information being brought in – thousands of things being filtered out so I can ground myself in the particular activity I'm engaging in. It is always fun and exciting. I always notice new features or old features in new ways.

CB: There are more forests in Red Bank and Eel Ground than on Maliseet territory. The forest seems wilder there. There are no trails and it is really moose country. There are hardly any Crown lands on Maliseet territory so it is difficult to exercise our rights. The Mi'kmaq territory is larger in area. There are only 5,000 Maliseet people and we don't have the voice that the Mi'kmaq have. We were the first to be in contact with the settlers. There is more apprehension and mistrust because of having less land. More land means more culture. More land would make us feel less deprived.

PP: I have travelled to nearly Bathurst Lake without seeing a moose, bear or deer, only a few pheasants. I wonder about the health of invisible organisms in the soil. In my father's time this was all beautiful forested country. We need to get away from some terms like ecosystem. It is our Mother Earth. Our worldview is Earth is a living thing. Until we understand Mother Earth, we are in trouble.

“Every time I walk in the forest, it is always changed, from weather to weather, season to season, depending on the time of month or how I feel. The attitude I bring with me in the forest will shape how I feel and what I'll observe and experience.” – Bill McKay.

MP: The same effects on our forest are seen everywhere.

Human activities negatively impacting our forest

BM: Humans have degraded the forest in terms of species diversity, height and volume. It is important to work on building

resilient systems and to be careful not to become engulfed in fear.

DS: The First Nation communities are assigned blocks and can't choose which blocks to harvest. A five-year forest management plan dictates the harvesting prescription of the block. We are concerned about the medicinal plants in the forest that existed before the clearcuts, but we can't do anything about preserving those plants.

JGC: Markets prevent us from managing our forest like we should. Most people appear not to have worried about nature and haven't acted responsibly. Individuals followed the government's example because they were assured that it was good practice but it wasn't.

Ironically, today more attention is paid to the unknown like the moon and less on what we have here. We seem to discard old ways/tools as soon as we get a new one. Lots of knowledge has been lost, even though people are increasingly educated. I'm not against educating people. I'm just pointing out that we shouldn't lose those practical understandings from others' experiences.

CB: Deforestation and clearcutting are major concerns. There are more homes and development. Some elders don't remember Pow Wows. They were sent to residential schools and told not to dance and practice their culture. Still today, access to land and salmon fishing are prohibited to those who should be able to access the land or resource.

“Still today, access to land and salmon fishing are prohibited to those who should be able to access the land or resource.” – Cecelia Brooks.

DE: Clearcutting, capitalism and compartmentalizing are problems. We are not accustomed to compartmentalizing – we look at Mother Earth. We need to think holistically – everything is connected. Probably lots of whites believe strongly in native beliefs but they are constrained or afraid of being crushed by the system. Natives have failed too. We have become co-opted by the Western culture. We have heard our youth deprecate the seventh generation. We need to work to educate the youth. They often disrespect their own traditions. U.S. President Obama had a great grassroots movement. We must think how to get the same for the traditional councils. We need to develop a movement to get back to traditional beliefs. We can't worry about losing traditional ecological knowledge. Mother Earth will come back after our destructive path – we need to save ourselves from ourselves.

“Clearcutting, capitalism and compartmentalizing are problems. We are not accustomed to compartmentalizing – we look at Mother Earth. We need to think holistically – everything is connected.” – Dan Ennis.

MP: Forests are overcut. Flooding has impacted the abundance of sweet grass. The gravel pit near the trail is affecting the area. The current trail used here is not the original Maliseet trail, which is obvious because the current trail is too steep to carry canoes. Some tree species have been depleted while others have become more common like the black spruce. There is improper use of silviculture and thinning. Thinning should be done to help the hardwoods grow – to ensure their roots are healthy. The new highway has also affected the habitat of animals. Animals are confused and exposed –

vulnerable to jacking and poaching. Flooding over the last 40 years and the dams has resulted in no salmon. It has changed the foods that are available.

Species of special concern

BM: We do a disservice to our community when we don't look at cultural significance of plants. For example, touch-me-nots were used by Mi'kmaq to treat exposure to poison ivy. Nagaya Forestry Restoration wants to develop a list of culturally significant plants and species for native and settler communities.

If we take something, we must know that there are enough individuals of that species for it to thrive. We don't just want to label, we want to know their relationship with other species. For Nagaya, Jack-in-the-pulpit is a species of concern. It is not that common. It is a medicinal plant. Other plants of concern include Indian cucumber and pin-cushion moss which is used in the floral business. We don't know how to sustainably harvest pin-cushion moss.

DS: Smaller mammals are species of concern. They have no cover in a clearcut. Pine marten is one example. Today, the diameter of trees is very small. Big spruce trees are fewer now. We need to have old trees. When I was a kid we called these trees “mother trees.” Later in Ranger School, we learned about the trees that produced the most seeds to repopulate and I thought about the “mother trees.” We should be taking only what we need.

“Species of concern for me are the ash tree, elms, maple, pines, spruce and cedar.” – Pat Paul.

CB: Black ash, butternut and all medicinal plants are species of concern. There is so much knowledge that has been lost. My neighbor did not know that he could eat elderberries. Bloodroot and wild ginger are other species of concern. Their habitats are being destroyed. Plantations are not supporting biodiversity. Goldthread, a plant used for its healing properties, needs to grow in old growth forest.

PP: Species of concern for me are the ash tree, elms, maple, pines, spruce and cedar. All trees have medicines. It does not matter that these medicines are available in other forms. There seems to be an assumption that medicines can be made in laboratories so trees can be cut without consideration. We can't find a birch tree big enough to make canoes anymore. Natives once used the entire tree or animal – nothing was wasted.

“Black ash, butternut and all medicinal plants are species of concern. There is so much knowledge that has been lost. My neighbor did not know that he could eat elderberries. Bloodroot and wild ginger are other species. Their habitats are being destroyed. Plantations are not supporting biodiversity. Goldthread, a plant used for its healing properties, needs to grow in old growth forest.”
- Cecelia Brooks.

MP: Species of concern to me are flag root, sweet grass and birch.

JGC: The entire Acadian forest is threatened. Many species are found in low numbers.



Butternut, shown here, is the only tree species on Canada's at-risk list. "The nuts of the butternut tree were used for food while the nut hulls were used as a dye for fibers and basket splints. The inner bark was used to make a tea, which would expel intestinal parasites." – Cecelia Brooks.

Traditional ecological knowledge and decision-making

BM: Legislation is needed to protect indigenous plants and prevent exotics like European ash and Scots pine. Nagaya stipulates that exotics should not be found in our certified woodlots.

Sadly, students are not allowed to practice their own experiential science. They are instead fodder for a political agenda. Knowledge is being lost on how to restore habitat of species like salamanders and ground woodpecker. They become enablers of bad policy, because they are not permitted to learn differently.

DS: We would like to see more planting crews and more young people planting trees. There should be no age restriction for those who want to work/plant on Crown land. It would make a big difference if 200 kids planted one tree or more in a clearcut.

We would like to see the foresters maintain the forest the way native people used to do. We would like to see the planting of different tree species. We want the youth to participate and learn at an early age. We need to keep an inventory of what is here.

If I had my way, I would cut and buy wood here and build homes for the housing shortage on the reservation. The wood would be processed here and people would have jobs here – from stumps to house. Our children would see that they have a future. It is not promising to be an aboriginal person. Aboriginals are refused when they apply to be a sawmill operator. We are told that there is uncertainty on how collateral will be collected if the venture does not work out.

The Royal Commission on Aboriginal Peoples (1996) resulted in many recommendations including First Nations being given first opportunity. These recommendations have not been realized. For example, the Elsipogtog Nation was not called when the mill in a neighbouring community, owned by Weyerhaeuser, was shut down. The Elsipogtog community was not considered even though they are next door and they have shown to the province that they can manage that much wood volume per year. Forest Stewardship Certification does not exist in this province because of the clause that ensures participation with indigenous people.

CB: Traditional ecological knowledge should be included in policies like how farmers are included in farm policy discussion. The province does not want to relinquish power. They don't want to know. There is a fear of losing control if First Nations are included. The province

makes money off natural resources and that is where the conflict lies.

“If I had my way, I would cut and buy wood here and build homes for the housing shortage on the reservation. The wood would be processed here and people would have jobs here – from stumps to house. Our children would see that they have a future. It is not promising to be an Aboriginal person. Aboriginals are refused when they apply to be a sawmill operator. We are told that there is uncertainty on how collateral will be collected if the venture does not work out.”
– Dennis Simon.

JGC: I was involved with government for 35+ years. We have to deal with politics – the elected and the bureaucrats. Companies and officials in power want to hang on to the old ways and assets. They also want to keep others out. They don't want to lose any control. Power holders know they can still make money off of natural resources. Restructuring is needed to remove some of their power in order to include traditional ecological knowledge.

PP: Our voices have been drowned. Why not try to take our voices to the Legislature? Why not give 1/10 the seats to Natives? In Maine, they at least have a Native observer in the government house. Traditional elder seats would be a good first step.



Blue flag. Courtesy: Cecelia Brooks.

DE: The system is broken. The capitalist system is the problem. The province is run by corporate interests. There is no place for traditional ecological knowledge in that system.

“Our voices have been drowned. Why not try to take our voices to the Legislature? Why not give 1/10 the seats to Natives? In Maine, they at least have a Native observer in the government house. Traditional elder seats would be a good first step.” – Pat Paul.

PP: There are lots of movements around the world working to raise awareness like Greenpeace and Sierra Club and the Al Gore’s. We need to connect. Some groups have gone too far to the negative side and turned people off – demobilized people. Many people are dispirited and think it is too late to do anything. Natives have a message if people want to listen – Natives have survived sustainably. Whites think they know best, better than the Natives. We can’t think that way if we want to learn the lessons to survive. Currently, Natives are silenced – no representation in Legislature and House of Commons. Poor people get bulldozed in this province.

MP: We should have Native representation in all levels of government and in non-government organizations like the Conservation Council. We should have Native people undertake the projects – not just collaborate.

“Companies and officials in power want to hang on to the old ways and assets. They also want to keep others out. They don’t want to lose any control. Power holders know they can still make money off of natural resources. Restructuring is needed to remove some of their power in order to include traditional ecological knowledge.” - Jean-Guy Comeau.

Relationship between traditional ecological knowledge and western-based science

BM: Our eurocentric culture wants to put a label on everything and make lists, but traditional ecological knowledge is more conceptual. We need to treat forest in forest time and not people time. Nobody gets beyond 500 years and we are infatuated with our own blink of existence. We are absorbed by our own self-importance. Openness would allow us to participate in traditional ecological knowledge. For example, being treated with medicinal plants requires time but in our culture today we want instant results – to pop a pill and feel better. Plants don’t work that way - dosages and preparation are different with traditional medicine.

There is useful knowledge, which is being lost because it is dismissed as unscientific. For example, when the alder leaf is the size of a mouse’s ear it is time to turn the horse into pasture. If you put the horse out too early, the horse will starve from lack of vegetation.

CB: The relationship between traditional ecological knowledge and western-based science is terrible at this time. Some people are starting to recognize this. The obvious first step is to get more people involved. More communication needs to flow down into the communities. Information usually gets stuck with the Chief and Band Council. Community members want to be involved.

JGC: Science and knowledge is influenced by what you need to survive. We have to go back to the old ways. We are running out of resources. We need to learn skills again such as farming. We

must do the same with forestry, but we have the problem of not having any power to make decisions about our forest. Much of the wood is being exported. Miramichi is a proven failure. The mills kept getting bigger and bigger, pushing out smaller guys then the big mills collapsed. All mills in Miramichi are now closed. Newcastle Lumber, owned by the Anderson's for over 100 years is now closed. People have no say – only the bureaucrats do. Wood is still being cut, even when no mills are operating. They took peoples' confidence away when they left. People feel disempowered. Maybe we can inspire an understanding of natural systems in youth. We should never despair. We can change. Only two things can't change – a dead person and a fool.

DE: Western science is part of the problem. There is an assumption that everything can be managed and studied to give all the answers. Traditional ecological knowledge needs to be given the greatest weight. Western science should carry less weight. The Natives are amenable to sharing and cooperating. Whites have an arrogant attitude about knowledge. Consultation with Natives is a big problem. Natives are not taken seriously and it is hard to get through to corporate elites, academics and scientists.

MP: Traditional ecological knowledge and western-based science complement each other. Universities need to include native people and knowledge to understand why native peoples live the way they did/do.

It was encouraged that everyone learn to develop keen observation. Elders would take notice of changes. The medicine that grew in more abundance than usual would prepare them over the year; knowing what sicknesses would come.

“The obvious first step is to get more people involved. More communication needs to flow down into the communities.”

– Cecelia Brooks.

Threats to traditional ecological knowledge and how to overcome them

BM: There is a lack of trust between government and indigenous communities and a loss of knowledge. Kejimikujik National Park is an example of disharmony between indigenous communities and park staff. Mi'kmaq communities know about gravesites inside and surrounding the park, but will not share this information with Park managers out of mistrust.

Our ego is a big threat. Education and awareness play a big role in breaking down ego barriers. Environmental non-government organisations need to understand our own ego and perceptions based on experiences. We need to look beyond our ego.

CB: There is a fear that the knowledge will be stolen. We can prevent this by having an ethics protocol and overseers like elder councils. There needs to be an understanding between all communities. We need to take control of our knowledge or someone else will.

“Our ego is a big threat. Education and awareness play a big role in breaking down ego barriers.” - Bill McKay.

JGC: False education is a problem. We are not receiving a real education. Empty education is promoted and kids are not really allowed to question and think. We

need family and partner support to survive. We need teamwork.

“Inclusiveness will generate a complete story.” – Michael Paul.

DE: We need to take our chances and spread traditional ecological knowledge. Mother Earth is at risk.

PP: When people want to know something like how to make baskets, they’ll find out.



Chokecherry. Courtesy: Cecelia Brooks.

MP: We focus too much on short-term projects – every effort deserves long-term work. I’m tired of projects that produce reports that sit on the shelf. Also, we are quite assimilated now. There was once an Aboriginal Environmental Network in the province – not sure if it still exists. We need to be inclusive with other bands. Borders didn’t always exist. Inclusiveness will generate a complete story.

What else needs to be said?

BM: Traditional ecological knowledge or local ecological knowledge is an enrichment of peoples’ lives. We are all elders in the making – there were elders, there are elders, there will be elders.

Old growth Acadian forest is constantly changing – a dynamic system. Old spruce will be replaced by hemlock. The ratio of species will change.

The seasonal smells make our forest special including the pungent smell of wild raisin, the budding smell in the spring and the decomposing leaves in the fall.

We need to focus on resilience; protect habitat where it exists and create it where it does not. When we remove a species it affects the entire system. Fishers used to eat porcupines, but a decline in fishers created an increase in porcupines and an increase of their impact on spruce trees. We need to be thoughtful of the consequences of our actions. In this way, it is possible to take trees from the forest and still have a resilient natural system.

There is much misconception in our society as to the cause of certain species’ decline. For example, it was falsely believed that the Mik’maq had decimated Nova Scotia’s black ash but it was actually overharvested by the settlers who used it to build containers for their ships.

Nagaya’s position is that a healthy forest begets a healthy community. I gave my grandson a white pine tree that is around 60 years old. His job is to protect it. I also gave trees to my daughter and brother in law. I’m trying to develop an intimacy with the forest – a sense of belonging. This intimacy will help expose new generations to traditional knowledge as well as create stewardship values. The knowledge will change through time, but it will still consider the relations between species and time. For example, there is a stage in the wild blueberry’s life when it is more susceptible to fungus infection. Trying to

figure out exactly when that is can be difficult. Traditional knowledge will tell you that susceptibility for infection is greater when the pussy willow comes into pollen. Elders of old knew that shad came up the rivers when flowers of Indian pear came out. Traditional ecological knowledge is still useful for providing food today. For example, fiddleheads and trout are the seasonal foods right now then will come gaspereau and then shad.

DS: Natives have to constantly fight for rights that are recognized in the Supreme Court – like the right to cut wood on Crown land for domestic purposes. There is no common courtesy. Why can't we provide for ourselves and our community? More aboriginal input would result in a better situation. The world would be a better place. We need to have more than cross-cultural training. We need to have a say at decision tables.

The Aboriginal Forestry Coordinators have been eliminated with the most recent budget. I'm not sure how the Department of Natural Resources is going to deal with First Nations now. The government can consult all they want but what matters is how the information and knowledge gathered is used. I feel aboriginals have kept up their side of the bargain but the government has not.

I would like to submit this work on traditional ecological knowledge to the Elsipogtog Newsletter. I want to get more youth in the forest and teach them the Mi'kmaq name of species. I want to show kids how to use geographic positioning system mapping tools while going out with elders and learning about medicinal plants.

I'm not proud of the work we have to do. We are blamed for natural destruction. I'm a third generation First Nation forester. The forest is important to me. I hope one day we can do things differently.

"It is important to remember that no land was ceded in New Brunswick. It is still Native land. We therefore have rights and responsibilities." - Dan Ennis.

CB: We need to get our forest back. We need to be united. We need to be dealt with as a unit. There are many divisions and these benefit our opponents. We need a strong voice. We, the Maliseet, are only 5,000 strong.

JGC: We need science to link traditional ecological knowledge as both important.

DE: It is important to remember that no land was ceded in New Brunswick. It is still Native land. We therefore have rights and responsibilities. There is too much talk, re-hashing and spinning of wheels. Outside groups are pressing their ways on Natives and now our youth are thinking their way. It is an uphill battle.

PP: Unfortunately, everything relies on money. What about establishing a think-tank for First Nations? A think-tank could be a way to generate resources and sustain the work.

We must stop all activities that harm Mother Earth. The worldview of whites must change. Earth is alive and sacred, and must be respected.

MP: Nomadic living for humans was essential for conservation. During the Green Corn Harvest, our ancestors would

gather at a designated spot. Runners would carry wampum belts (belts of shells that commemorated events). Reports would be shared. They would identify plants, animals and medicines and discuss their status. The wampum belts were inter-generational. When the representatives sat in council in the longhouse, they would all be updated on the status of medicines and their communities. Despite the different Algonquin dialects among the Wabanaki (Maliseet, Mi'kmaq, Passamaquoddy and Penobscot), they would communicate and share knowledge through such systems.



Braiding sweet grass. Courtesy: Stacy Howroyd.

“During the Green Corn Harvest, our ancestors would gather at designated spot. Runners would carry wampum belts (belts of shells that commemorated events). Reports would be shared. They would identify plants, animals and medicines and discuss their status.”

– Michael Paul.

Conclusions and Recommendations

The conversations contained in this report illustrate how our current way of relating to our forest is not holistic, sustainable, adaptive to change or respectful of our true nature as beings dependant on its health and diversity. It is up to us to build new relationships and strengthen old ones to reinstate our society’s intimate relationship with the Earth.

Traditional ecological knowledge embodies the basic knowledge elements of respect, observation, regular interaction, innovation and sharing. Though western-based science and traditional ecological knowledge seem to be at opposite ends of the knowledge spectrum, there is place for cooperation if traditional ecological knowledge can have an equal voice in our institutions.

Traditional ecological knowledge must be incorporated into forest management decisions. The Canadian Council of Forest Ministers in its 1992 National Forest Strategy recognizes the need for increased participation by and benefits for aboriginal people in the management and use of our forest. The forest has been used by natives and non-natives as a source of livelihood, food, medicine and spiritual growth for generations.

We recommend the formation of an advisory group on traditional ecological knowledge that can provide input into public forest management. Including First Nations in genuine decision-making processes will allow the sharing of traditional forest knowledge that is essential for the protection and restoration of the native forest of New Brunswick.

Traditional ecological knowledge must be included in the province's recently released biodiversity strategy. Parties to the U.N. Convention on Biological Diversity, including Canada, have committed to respecting, preserving and maintaining the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity. Article 8(j) of the Convention also commits the parties to encouraging the equitable sharing of the benefits arising from the utilization of such knowledge.

The Acadian forest and its species will need to adapt to the changing climate of the Earth. To adapt to the changing climate and its effects, the forest must be resilient in terms of biological diversity and overall health.

Traditional ecological knowledge teachings can provide the ancestral timeline and wisdom needed for our society to co-exist with the Acadian forest and its species through the decades of change ahead.

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