



Naalaktuagtuni Ilitchiruni-Lu

Listening & Learning

Volume V, Issue II

Alaska Native Science Commission Newsletter

Summer 2005

ANSC Commissioners

Elaine Abraham, Chairperson
Teacher

Orville Huntington, Vice-Chair
Natural Resources

Anne Walker, Treasurer
Health

Alice Petrivelli, Secretary
Elder

Oscar Kawagley
Education

Charlie Johnson
Circumpolar Arctic Research

Taqulik Hepa
Arctic Research

Nirvana Ramos
Student Advisor

Viola Stepetin
Student Advisor

Inside this Issue

We Hate Fire	Page 1
Indigenous Knowledge Systems Colloquium	Page 1
Indigenous Systems/ Alaska Native Ways of Knowing	Page 3
Interview with ANSC Student Board Members	Page 5
Nunavut Students Visit ANSC	Page 6
Four Generations Working Together to Save the Environment	Page 7
New Additions to ANSC Web Site	Page 7
An ANSC Intern's Experience	Page 9
Snow Change Workshop on Indigenous Observations of Ecological and Climate Change	Page 10
Calendar of Events	Page 11

"We Hate Fire": understanding statements on context

By Orville Huntington, ANSC Board, and Henry Huntington, Huntington Consulting.



Fire to prevent fire: backburn in Huslia

Last October, at a workshop held in Huslia, we were discussing forest fires and related topics. One Native Elder participating in our discussion on impacts of fire said, "We hate fire." Many of us were surprised, for several reasons. First, expressions of "hatred" are considered *hutlaanee* (taboo) in Koyukon culture. Second, fire in the Koyukon Native context has a spirit and can respond to what people say, so that statements about fire can have a powerful effect on what fires do. Third, fire serves many useful purposes such as cooking and heating, so it is hard to see that all fire is equally bad. Fourth, in many places fire is regarded as having a beneficial effect on the environment, leading to plant succession

and changing wildlife habitat, which may benefit several animal species. How, then, can we begin to understand what the Native Elder from Huslia meant?

In our workshop, the participants included Huslia residents of various ages, people from other villages, researchers from the university and elsewhere, and government agency personnel. The communication challenges were not simply cross-cultural, but also across occupation, age, and reason for being at the workshop. What was said had to speak to many distinct audiences, all in the same room, requiring careful thought for both speaker and listener alike. It is important in that setting, or any similar setting in a small village or out in the woods, to be careful in interpreting what you hear—it is all too easy to think you understand, when in fact

Continued on page 2

Indigenous Knowledge Systems Colloquium

By Patricia Cochran and Larry Merculieff, ANSC.

On January 20-22, 2005, an Indigenous Knowledge Systems Research Colloquium was held at the University of British Columbia bringing together a representative group of indigenous scholars from the U.S., Canada and New Zealand to identify salient issues and map out a research strategy and agenda to extend our current understanding of the processes of learning that occur within and at

the intersection of diverse world views and knowledge systems. Drawing on the work of the distinguished scholars who participated in the Colloquium, scholars hope to develop an international and interdisciplinary research center that will contribute to our understanding of the relationship between indigenous

Continued on page 3

Continued from p. 1-We Hate Fire

you lack crucial information about the context in which things were said. For example, some statements may reflect frustration that earlier attempts to convey information were ignored by those who had the responsibility to listen.

Here are some various interpretations of the Elder's statement:

- Forest fires cause disruption to the landscape, in particular making travel difficult in areas where there are many fallen trees or where the re-growth is especially thick, which is predicted in Koyukon oral traditions to cause problems for future generations. Around Huslia, the landscape has plenty of diverse habitats, and so the negative aspects of forest fires to humans and some animals more than outweigh any benefits they provide.
- Response to forest fires is determined by the landowners, which around Huslia are largely the federal and state governments, which typically let fires burn unless they threaten a village. This sense of powerlessness may exacerbate feelings about loss of land ownership, the transfer of subsurface rights to federal control, and other aspects of disenfranchisement or separation from the land.
- The Elder's cabin (and a shelter cabin for emergencies) had been destroyed in a (recent) forest fire (near Huslia, which resulted from a land management let burn policy and poor recordings by the land managers on cabins in the area), so her statement reflects a tragic personal loss rather than a general view from the community.

In trying to understand the Native Elder's statement, we need to think also about to whom she was speaking. The presence of government personnel, who had attended the meetings on the fire event in the past and who make decisions about how to respond to forest fires, suggests that she was making a political statement to call attention to flaws in fire policy. She may have had a message for the academic researchers too. Fire ecology often explores the beneficial aspects of forest fire for regeneration of plants and for creating productive habitat. But agency staff and researchers sometimes forget that Native traditional knowledge and wisdom are tied to place, especially when there is a direct connection to Nature as in Huslia. The Elder may have wanted to correct an overly positive view of fire by pointing out the strong negative impacts it can have, especially to rural residents who rely heavily on these winter cabins for survival in winter. And she may have been trying to say something to the other Natives in the room, reminding them that fire cannot be separated from other aspects of the environment or society.

But how can we get beyond speculation about her intent, and discover what she really meant? In a workshop setting, this may be very difficult. There often isn't time to follow up various ideas, and the same diverse audience that makes the initial statement ambiguous may influence any explanation that the speaker offers. One could also follow up with the speaker later, but again the explanation may depend on who is following up. One can also rely on people who know the speaker, such as a local researcher or local liaison, but that person may not feel comfortable speaking on behalf of someone else. Perhaps we could start by looking at all aspects of our research and our responsibilities to those sharing with us, before interpreting and repeating something that may have been said for a particular purpose or to a different segment of the audience.

In practical terms, it is unlikely that we can fully explore what someone means. This is especially true when we are using archival materials, reports, and other products of past work. The people involved are not likely to be available to explain what they meant, and some selection and interpretation may influence what was included and what was left out. Also, the people who prepared those materials may have been unknowing victims of their own beliefs, seeing in many instances what they wanted to see, and interpreting only information within their or the presenters' lifetime. In reality, Native oral traditions from the Koyukuk go back to distant times, before the heavy influence of outside cultures. Current interpretations are not even close to what is understood by those who still believe in the old ways of living out in the woods. If it is hard to interpret "We hate fire" at the time, it is much harder to do so a long time later or a long way away.

We do not mean that the situation is hopeless. To the contrary, ambiguity can also be seen as richness, particularly in an oral culture where statements are often intended to have multiple meanings or to express subtlety. The problem lies in attempting to find a single, clear meaning in a rich, ambiguous statement. "We hate fire" may make sense in a particular context, but it makes little sense when taken by itself, out of context and isolated from the rest of the discussion and experiences that led to it.

If we took the Native Elder literally, as many often do out of respect, and concluded that all Koyukon people hate fire at all times and places, we would be going too far. We would also not be living up to our responsibility of hearing and carrying on a message that was said for a specific reason to specific people who may be able to make a difference for future generations. If we ignored her, we would miss the fact that there are many negative aspects and associations of fire for Huslia residents and others from around the region. If we recognize that we are faced with a complex context, then perhaps we are on the right track to a cautious understanding of the overlapping and sometimes contradictory ideas and experiences that surround the web of interactions between fire, people, and their environment.



Indigenous Knowledge Systems/ Alaska Native Ways of Knowing

By Ray Barnhardt, University of Alaska Fairbanks, and Angayuqaq Oscar Kawagley, University of Alaska Fairbanks and ANSC Board.

Abstract (adapted with permission from Barnhardt, R., & Kawagley, A. O. (2005). Indigenous Knowledge Systems and Alaska Native Ways of Knowing. *Anthropology and Education Quarterly*, 36(1), pp. 8-23. The article is also posted at: www.ankn.uaf.edu/rol/AEO_Indigenous_Knowledge_.html)

This article seeks to extend our understanding of the processes of learning that occur within and at the intersection of diverse world views and knowledge systems, drawing on experiences derived from across Fourth World contexts, with an emphasis on the Alaska context in particular. The article outlines the rationale behind a comprehensive program of educational initiatives that are closely articulated with the emergence of a new generation of indigenous scholars who are seeking to move the role of indigenous knowledge and learning from the margins to the center of the educational research arena and thus take on some of the most intractable and salient issues of our times.

A few years ago, a group of Alaska Native Elders and educators was assembled to identify ways to more effectively utilize the traditional knowledge systems and ways of knowing that are embedded in the Native communities to enrich the school curriculum and enliven the learning experiences of the students. After listening for two days to lengthy discussions of topics such as indigenous world views, Native ways of knowing, cultural and intellectual property rights and traditional ecological knowledge, an Inupiaq Elder stood up and explained through an interpreter that he was going to describe how he and his brother were taught to hunt caribou by their father, before guns were commonplace in the upper Kobuk River area of northern Alaska.

The Elder described how his father had been a highly respected hunter who always brought food home when he went out on hunting trips and shared it with others in the village. One day when he and his brother were coming of age, their father told them to prepare to go with him to check out a herd of caribou that was migrating through a valley a few miles away. They eagerly assembled their clothing and equipment and joined their father for their first caribou hunt. When they reached a ridge overlooking the nearby valley, they could see a large herd grazing and moving slowly across a grassy plain below. Their father told his sons to lay quietly up on the ridge and watch as he went down with his bow and arrows to intercept the caribou.

The boys watched as their father proceeded to walk directly toward the caribou herd, which as he approached began to move away from him in a file behind the lead bulls, yet he just kept walking openly toward them. This had the two brothers scratching their heads wondering why their father was chasing the caribou away from him. Once the father reached the area where the caribou had been grazing, he stopped and put his bow and arrows down on the ground. As the (now) Elder told the story, he demonstrated how his father then got into a crouching position and slowly began to move his arms up and down, slapping them against his legs as though he were mimicking a giant bird about to take off. The two brothers watched intently as the lead bulls in the caribou heard stopped and looked back curiously at their father's movements. Slowly at first, the caribou began to circle back in a wide arc watching the figure flapping its wings out on the tundra, and then they began running, encircling their father in a closing spiral until eventually they were close enough that he reached down, picked up his bow and arrows and me-

Continued on page 4

Did you know?

The living resources of the Arctic not only sustain Indigenous Peoples in an economic and nutritional sense, but also provide a fundamental basis for social identity, spiritual life and cultural survival.

~ Arctic Climate Impact Assessment (ACIA)

Continued from p.1- Indigenous Knowledge Systems Colloquium

ways of knowing and those associated with western society and formal education. In addition, they want to devise a system of education for all people that respects the epistemological and pedagogical foundations provided by both indigenous and western cultural traditions.

The research agenda will advance our understanding of learning as it occurs in diverse cultural contexts by exploring the interface between indigenous and western knowledge systems, drawing on the experiences of indigenous peoples from around the world. The expansion of the knowledge base associated with learning and indigenous knowledge systems will contribute to an emerging international body of scholarly work regarding the critical role that strategic utilization of the local cultural context can play in fostering academic success in learning, particularly among indigenous populations. University of Alaska Fairbanks is taking the lead in submitting a proposal to the National Science Foundation to fund development of this center, in which the Alaska Native Science Commission will be a partner.



Continued from p.3-Indigenous Knowledge Systems/Alaska Native Ways of Knowing

thodically culled out the choice caribou one at a time until he had what he needed. He then motioned for his sons to come down and help prepare the meat to be taken back to the village.

As the Elder completed the story of how he and his brother were taught the accrued knowledge associated with hunting caribou, he explained that in those days the relationship between the hunter and the hunted was much more intimate than it is now. With the intervention of modern forms of technology, the knowledge associated with that symbiotic relationship is slowly being eroded. But for the Elder, the lessons he and his brother had learned from their father out on the tundra that day were just as vivid when he shared them with us as they had been the day he learned them, and he would have little difficulty passing a graduation qualifying exam on the subject 70 years later. The knowledge, skills and standards of attainment required to be a successful hunter were self-evident, and what a young hunter needed to know and be able to do was both implicit and explicit in the lesson the father provided. The insights conveyed to us by the Inupiaq Elder drawing on his childhood experience also have relevance to educators today as we seek ways to make education meaningful in the 21st century. It is to explicating such relevance that the remainder of this article will be directed through a close examination of common features that indigenous knowledge systems share around the world, followed by a closer look at some of the initiatives that are contributing to the resurgence of Alaska Native knowledge systems and ways of knowing as a catalyst for educational renewal.

Indigenous peoples throughout the world have sustained their unique worldviews and associated knowledge systems for millennia, even while undergoing major social upheavals as a result of transformative forces beyond their control. Many of the core values, beliefs and practices associated with those worldviews have survived and

are beginning to be recognized as having an adaptive integrity that is as valid for today's generations as it was for generations past. The depth of indigenous knowledge rooted in the long inhabitation of a particular place offers lessons that can benefit everyone, from educator to scientist, as we search for a more satisfying and sustainable way to live on this planet.

Actions currently being taken by indigenous people in communities throughout the world clearly demon-

"Indigenous peoples throughout the world have sustained their unique worldviews and associated knowledge systems for millennia, even while undergoing major social upheavals as a result of transformative forces beyond their control."

strate that a significant "paradigm shift" is under way in which indigenous knowledge and ways of knowing are beginning to be recognized as consisting of complex knowledge systems with an adaptive integrity of their own. As this shift evolves, it is not only indigenous people who are the beneficiaries, since the issues that are being addressed are of equal significance in non-indigenous contexts (Nader 1996). Many of the problems that are manifested under conditions of marginalization have gravitated from the periphery to the center of industrial societies, so the new (but old) insights that are emerging from indigenous societies may be of equal benefit to the broader educational community.

The tendency in the earlier literature on indigenous education, most of which was written from a non-indigenous perspective, was to focus on how to get Native people to acquire the appurtenances of the Western/scientific view of the world (Darnell 1972; Orvik and Barnhardt 1974). Until recently there was very little literature that addressed how to get Western scientists and educators to understand Native worldviews and ways of knowing as constituting knowledge systems in their own right, and even less on what it means for participants when such divergent systems coexist in the same person, organization or community. It is imperative, therefore, that we come at these issues on a two-way street, rather than view them as a one-way challenge to get Native people to buy into the western system. Native people may need to understand western society, but not at the expense of what they already know and the way they have come to know it. Non-Native people, too, need to recognize the co-existence of multiple worldviews and knowledge systems, and find ways to understand and relate to the world in its multiple dimensions and varied perspectives.

The intent of this article is to extend our understanding of the processes of learning that occur within and at the intersection of diverse world views and knowledge systems through a comparative analysis of experiences derived from across multiple Fourth World contexts, drawing in particular on our work with the Alaska Rural Systemic Initiative over the past ten years. The article will outline the rationale behind a comprehensive program of educational initiatives that are closely articulated with the emergence of a new generation of indigenous scholars who are seeking to move the role of indigenous knowledge and learning from the margins to the center of the educational research arena and thus take on some of the most intractable and salient issues of our times.



Interview with ANSC Student Board Members

By Aaron Peters, ANSC Intern.

Viola Stepetin

Ms Viola J. Stepetin is Unangan Aleut from St. Paul Island. Her father is from the Pribilofs and her mother is from Atka on the Aleutian chain.

Why did you choose to become an ANSC board member?

I realized early from successful Native leaders that cultural and academic education can enable me to be in a good position to help the Native American/Alaska Native community which raised me. It is the skills and knowledge I have secured while working with the Alaska Native Science Commission (ANSC), American Indian Science and Engineering Society (AISES), Alaska Native Science and Engineering Program (ANSEP) and various Native American/ Alaska Native organizations throughout the globe that continually strengthen my knowledge and desire to do better.

What have you learned from being an ANSC board member?

My involvement with the ANSC has given me the an opportunity to gain knowledge while working with the Alaska Native community. This has given me confidence to grow and mature. I have also learned the basics of being on a board, the use of consensus and Robert's Rules of Order. The roles and responsibilities of the board members are significant and challenging.

Can you describe for me one or two of your most important accomplishments while being an ANSC board member?

I think an important accomplishment for me would be the excellent examples of leadership that each board member and ANSC staff present in their roles. The leadership role modeling and the personal examples to follow have helped strengthen me in many areas. For example, I was awarded First place in the University of Alaska Anchorage (UAA) African American Hispanic Asian International and Native American's (AHAINA) Men and Women of Excellence award this past spring, and I have to say the strength and encouragement from the ANSC board and staff has helped me to aspire to do my best and I thank each one for their support.

What are some things that you particularly like about being an ANSC board member?

One or two of my most important accomplishments while being an ANSC board member is strengthening my work, goals, and concerns as established by the ANSC goals and concerns list. I have been successful in promoting science to Native youth by working with Native youth at the high-schools, mentoring and helping students with scholarships, letters of recommendations, and going to college. One of my greatest accomplishments is helping Native youth feel good about completing high-school and entering college. The fact that they are motivated to go to school and

Continued on page 9

Nirvana Ramos

Ms. Nirvana E. Ramos is the daughter of Charmaine Ramos and granddaughter of Elaine Abraham, both from Yakutat. She belongs to the Raven Moiety, Copper River Clan from the Owl House and is the daughter of the Daak Taan, Granddaughter of the Coho Clan, and Great Granddaughter of the Teik Weidi (Brown Bear). She is member of the Mt. Saint Elias Dance Group of Yakutat, Alaska.

Why did you choose to become an ANSC board member?

I listened to Grandma's advice about being on the board so I thought it would be a great learning experience, given how unique the board and organization is.

What have you learned from being an ANSC board member?

I learned the rhythm of how a board works. I grew up with many family members on different boards, including my mother and grandmother, so as a kid I stood by and watched. Now as a student advisor, I really appreciate how my input is heard and valued. One important thing I learned is the fine art of trying to get a bunch of different people who have their own unique perspective on issues to agree on things.

What are some things that you particularly like about being an ANSC board member?

I enjoy learning more about what's going on in the state. I know a lot about what's going on in the Southeast region but I really enjoy hearing about Alaska Native Issues going on throughout the state. The commission is a great way that Alaska Natives work together in order to maintain their cultural heritage/identity, and come together to solve problems/issues.

Continued on page 8

Nunavut Students Visit ANSC

By Christina Salmon, ANSC Intern.

On April 29th, 2005, the Alaska Native Science Commission welcomed 20 college students from Nunavut, Canada to tour our office and learn about the commission and the work we do here. They felt that the commissions' unique approach to dealing with community involvement and having communities identify their own needs would be a valuable perspective for them to take away from their trip experience.

The students are all studying in the Nunavut Sivuniksut Program in Ottawa. The program focuses on Nunavut affairs where students learn about Inuit History, Inuit-Government Relations and the Nunavut Land Claim Agreement. Students also learn the traditional skills of throat singing, drumming, and dancing. ☀



Canadian Inuit Throat singing



ANSC Staff and Nunavut Sivuniksut Students at Resolution Park



Four Generations Working Together to Save the Environment

By Christina Salmon, ANSC Intern.

My Yupik native name is Naruyaa, which is Seagull in English, and Christina Salmon is my English name. I am the youngest of three generations of women in my family from Igiugig, Alaska. My grandmother was born in Kukaklek and raised and lived in Igiugig her whole life. My mother was also born in Igiugig and still resides there today. I was raised in Igiugig and would like to raise my family there as well.

My grandmother lived in an era when respect for Mother Nature was an unwritten rule; because without respect for nature she would not be alive today. Her family herded reindeer near Kukaklek Lake. They were nomads and lived off the land year-round. Not only did her family depend on wild game and plants in their area for food, but they also relied on it for clothing and shelter. All of her clothing was made from animal skins and furs. Caribou, moose, wolves, beaver, reindeer and otter pelts were turned into shirts, pants, winter coats, blankets and socks. Animal skins were used to make tent-like homes that were easily taken apart and light to carry. If the people of my grandmother's genera-

tion did not have respect for the land they lived off of, it would have been impossible for future generations to survive. But my grandmother and everyone else living in that era understood the importance of respecting what the earth gave them.



Kvichak River

In 1971, ANCSA was passed by Congress and changed life as my grandmother knew it forever. The land was divided. Nomadic life changed into sedentary living. A cash economy was booming. There was an explosion in technology, infrastructure development occurred at a rapid pace, community

powerhouses were built and more schools opened as a direct result of ANCSA. My grandmother's generation was lost in all the advancements that were occurring around them at a swift pace. They never learned the proper way to dispose of trash that was new to them like plastics, aluminum, batteries and Styrofoam. Before sedentary living was introduced to them, they threw all waste back into the water or it was burned. But back then, trash that was thrown into the river was not harmful to the environment because it was biodegradable. Now when they had non-biodegradable trash to dispose of, it too was thrown into the river because it was the only way they knew to get rid of garbage. Trash that was non-biodegradable that they began throwing in to the water was harmful to the environment, but they were unaware of that. Still today, we are cleaning up lead acid batteries, plastic bottles, plastic six-pack tops and metal cans out of our river and ponds.

As I try to talk to my grandmother about the deadly effects of polluting our freshwater sources, she only looks at me with

Continued on page 8

New Additions to ANSC Website

By Leslie Hsu Oh, ANSC.

Global Climate Change

www.nativescience.org/climatechange

We have put together a list of resources on the subject of Climate Change and/or Global Warming, especially its profound effects on Alaska Natives and indigenous peoples around the world who are closely tied to the lands and waters of this planet.

National Subsistence Database

www.nativescience.org/subsistence

ANSC developed an online national database of tribal subsistence research projects and agendas to implement a primary recommendation from The National Tribal Subsistence Workshop. This workshop was held in Anchorage, Alaska on April 13-15, 2003 and was attended by more than 40 tribal representatives from across the nation.

If you or your colleagues are working on any tribal subsistence related projects, please enter them into the database at www.nativescience.org/subsistence. We would like to make sure that your project is listed as part of this national collection as a way for tribes to share data and information which is so vital to our communities and way of life. We have attempted to make this database easy to use and community-friendly and we welcome your comments or suggestions.

Site Redesign

We are also in the process of redesigning www.nativescience.org through user-centered methodologies. It is important for us to hear from you, the user, about what you like and don't like about the current web site. How can we better serve you with this web site? We would especially like to know what tasks you would like to accomplish on www.nativescience.org. Please email any comments to Leslie Hsu Oh at loh@aksnc.org or call 907-258-2672. Thank you in advance for your valuable feedback.



Continued from p.7-Three Generations Working Together to Save the Environment

a perplexed expression and tells me that it never hurt the environment when she did it as a child. Why does it hurt it now? When I attempt to explain about the poisons that are found in many of the materials that we use today, she acts confused and shakes her head telling me there were never chemicals to worry about when she was younger. Why did we ever start using them? Finally, when I start talking to her about advancements in technology and the new economy that we are living in, she merely nods her head in amazement.

"I don't see why we ever had to change with technology," she tells me. "We all lived happy, long, productive lives before computers, trucks and four wheelers and running water was around. Why can't we all live life like we use to?"

Along came my mother's generation. She's still confused with technology advancements and community infrastructure as my grandmother was, but she never lived a nomadic way of life and never stopped to think twice about how she was disposing of solid waste. Today she lives like a soul lost between two worlds: that of the world her mother came from where they never knew about disrespecting the environment, and the world in the twenty-first century where polluting the land is done without much effort or thought. The little education that my mother and her generation received was poor and not taken seriously. Since her parents were unaware of the importance of schooling, she also was oblivious to the many rewards of a solid education. My mother never paid attention to technological advancements because her parents never did, and she was living life fine without it. New machinery, like tractors and dump trucks, amuse my mother as she walks the streets of Anchorage. In her village, there are no machines like that. Several families had four-wheelers, but most still use rowboats or walk everywhere. When my mom finally started learning about pollution in our environment, she did not know what to make of it. Her mom had never told her that burning Styrofoam emits harmful chemicals in to the air, or that throwing pop cans into the tundra was not okay because it would never degrade. All the chaos of

trying to deal with the past as her parents knew life, and life now as her children saw it, made it even more confusing for my mother. She decided to stay out of all political strife about the environment because she did not know who was right, or what was bad for her. My mother only knew that she did not want to be part of any of the changes that were happening around her, just like her mother did.

As I inform my mother about the importance of recycling and keeping our environment healthy, she is beginning to understand. She spends a lot of time composting for her garden, participating in our community clean-ups, and recycling aluminum and batteries. When I tell her that we need to protect our lands and keep our environment pristine, she simply smiles in agreement and tells us we must respect the environment in order for it to continue taking care of us. She only tells me to respect the environment because that is all she knows; like my grandmother who knows nothing about environmental conservation only because she does not understand the English language very well. But she knows, indeed they both know, that respect is all that is necessary when protecting our earth; because my grandmother and her generation were the best conservationist until modern waste was introduced to them.

Then there is me, bonding three generations that have all been associated with the new economic changes occurring in our tiny village. I was raised to respect the land and not to forget my culture and traditions, but at the same time, I was raised during a time of the Internet, cell phones and satellite television. My tribe now turns to me and my generation of students that have grown up with a strong western education background, students that want to preserve and protect the environment around them. We do not want to lose our cultural history. We want to restore the land and its value using the benefits of technology. It has been incumbent on me to develop solutions for our communities' environmental concerns and to pass these concepts onto the world, making it a safer place for everyone. It is now my turn to pass my cultural values and respect for

the environment onto future generations and challenge them to make changes in the environmental issues surrounding our people today. So, when I tell my younger siblings and my son to constantly be aware of our areas' environmental stability, they will nod their heads "yes" because they will know. They will know because our grandmother and mother taught us to respect the land we live off of. They will also know because they have the technology and knowledge to help them preserve and protect Mother Nature. 

Continued from p.5-Nirvana Ramos, Interview with Student Board Members

What is your long-term employment or career objective?

I enjoy school and I would like to go on to pursue either a graduate or master's degree. I want to make a difference in the Alaska Native community, and it doesn't matter if it's a small or big community, I just want to make a positive difference.

Who or what in your life has influenced you most?

My mother has influenced me the most. I come from a matrilineal line and I am really close to my mother. My mother makes a difference in every decision I make. A parent influences a child from the very beginning so their mother is their foundation. The influences you get from your parents are your first and lasting because they are the first to introduce you to the outside world.

What other activities are you involved in?

Currently, I am involved in school, family and our family business (cultural interpreter). I was involved in a lot of things but lately I have been narrowing down my participation in order to concentrate more on school. I am currently working as a student intern for the First Alaskans' Institute. 

An ANSC Intern's Experience

By *Brianne Webber, ANSC Intern.*

Brianne Webber is a full time student at the University of Alaska Anchorage. Brianne completed an internship with the ANSC at the Alaska Native Harbor Seal Commission through the fall and spring 2005 school year.

First and foremost, I want to personally thank the ANSC for giving me the opportunity to work as a student intern. It was an awesome learning experience and I have had a lot of fun. Working in an office environment with three inspiring girls made me look forward to work each and every day.

Without having worked as a student intern with the Alaska Native Harbor Seal Commission, there are a lot of important tasks that I would not know. I was assigned to organize several meetings and teleconferences, make

"Because of this internship, I have changed my major from Business Administration to Geological Sciences."

travel arrangements for participants, create and publish a seasonal newsletter, make informational posters, bill paying, learn about grant management, became a certified bio-sample technician, assisted in teaching bio-sampling trainings, technical support, office chores, took inventory, updated websites, helped in hiring new bio-sampling coordinator, attended ANSC internship lunch meeting, assisted the executive director, and made a lot of new friends.

My favorite part of this whole experience was meeting all the people who make everything possible. I met a lot of the Alaska Native hunters as well as the ANHSC board of directors and alternates. Everyone was so friendly and kind and it was always nice meeting a smiling new face. In doing this internship, I rediscovered my enjoyment for science. Assisting in many bio-sample trainings and other tasks regained my appreciation for that field.

I am also considering a minor in environmental studies, and possibly a major in biological science if geology does not work out for me. I just completed my second year at UAA and I am looking forward to returning this fall.

Thank you for the great opportunity!



Continued from p.5-Viola Stepetin, Interview with ANSC Student Board Members

know that there are people who care about them and want to see them succeed is what truly makes me happy. I traveled to Sitka this last semester and visited high-schools with the ANSEP program to give presentations on the careers available in Science & Engineering. It was an incredible experience.

Briefly, would you summarize your work history & education?

The history of my environment has not only groomed me to pursue options, but my career goals are a direct influence on my professional career. My career goals first include completing a Civil Engineering degree, so I will have a stronger foundation in Alaska specializing in Civil and Metallurgical Engineering. I recently graduated in December 2004 with leadership honors earning a Welding Technology B.S. This was complimented by my educational experience with working for the NASA Glenn Research Center in Ohio. I understand the significance of a student advisor for the Alaska Native Science Commission. It is a position that allows me to learn from other Alaska Native Scientists and Elders while I simultaneously give back. Additionally, it gives me an avenue for facing new challenges that Natives and aboriginal peoples face in Alaska and throughout the rest of the world.

What is your long-term employment or career objective?

My long term career objective is to work on various projects in Alaska. I also hope to speak my Aleut language fluently.

Who or what in your life has influenced you most?

My life is most influenced by the history of the American Indian and Alaska Native people as well as people around the world who survive under circumstances that are often times harsh and destructive toward indigenous ways of life. Also, my parents who by living a traditional lifestyle through language and culture have taught me by example to always remember where I came from and to be sure to take this where I am going now and in the future. My father has taught me the traditional fur seal harvesting of the Pribilovians. Cutting and bagging up 20+ seals for the community of St. Paul always reminds me that we're not too far removed from our ancestral ways.

What other activities are you involved in?

Activities I am involved with are ANSEP, American Indians Science and Engineering Society, American Lung Association, American Welding Society, American Society of Non-Destructive Testing, UAA's AHAINA and Native Student Services.



Snow Change Workshop on Indigenous Observations of Ecological and Climate Change

By Aaron L Peters, ANSC Student Intern.

ANSC will partner with the Inuit Circumpolar Conference (ICC) and the International Snow Change Organization based in Finland to organize "Snow Change 2005 Workshop on Indigenous Observations of Ecological and Climate Change". The purpose of the Snow Change Workshop is to highlight the voices from the communities of the changing Arctic. It is planned for September 28-30, 2005 in Anchorage, Alaska.

The workshop and colloquium will be held prior to the World Wilderness Congress (WWC), in which ANSC has played a role in organizing. The WWC is an international gathering of environmental organizations and leaders who come together to share information. This will also provide an opportunity for dialogue with scientists, conservation organizations and stakeholders.

It is vital to strengthen the voice of Arctic region inhabitants in key policy debates involving climate and scientific research in the North. Arctic indigenous people are disproportionately burdened by these developments, yet under-represented at national and international forums where decisions are made.

Unlike scientific and academic communities, northern indigenous communities have had only a few opportunities to come together to discuss common issues regarding climate change and its implications for culture, subsistence, nutrition, health, and community well-being from their own knowledge and perspective. The Snow Change conference will allow for these discussions to happen.

Outcomes of Snow Change 2005 in Alaska will include:

- Identifying key climate, environment and health concerns and issues.
- Setting priorities for addressing identified concerns and issues.
- Reviewing current governmental, regional, and local programs and plans involving climate change and its potential or actual impacts.
- Identifying available resources for collaboration, indigenous monitoring systems, and possible projects.
- Demonstrating the need for indigenous communities to work together.
- Showing the importance of respecting and nurturing traditional knowledge.
- Discussing adaptation and resilience issues and strategies.
- Discussing landscape and language issues.
- Discussing spirituality and climate change.
- Issuing a meeting report that may stimulate action by governments, scientists, and indigenous peoples in research and planning around climate change issues.



Snow Change Workshop will bring together indigenous communities from around the Arctic

The state of the world's environment and the looming effects of global climate change are deeply disturbing and calls for immediate action. The climate change issues, such as the rapidly melting ice in polar areas, changes in precipitation levels, and adverse effects on the populations, behavior, and migration patterns of higher trophic species, not only impact ecosystems, but also individuals and indigenous cultures in potentially significant and adverse ways.

In the words of Sheila Watt Cloutier, Chair of ICC, "The Arctic is the world's barometer of climate change. We are the early warning system for the world. What is happening to us now will happen to others further south in years to come."

The Arctic and its peoples are at great risk as a result of global climate change. This workshop and colloquium will begin to address these threatening issues with indigenous peoples at the forefront. More information on workshop can be found at www.snowchange.org.



Calendar of Events

July 6-7, 2005

25th Anniversary of the Alaska National Interest Lands Conservation Act (ANILCA)

Anchorage, Alaska
Phone: 907-276-1917
Fax: 907-274-4145
Email: acfinfo@akcf.org
URL: www.akcf.org/ANILCA.htm

July 20-23, 2005

Exercise, Obesity & Disease 2005 Annual Meeting and Symposium

Sitka, Alaska
Harrigan Centennial Hall

August 17-20, 2005

Aleutian Life Forum in Unalaska

Unalaska, Alaska
Phone: 907-581-4589
Email: brewer@ims.uaf.edu
URL: www.aleutianlifeforum.org

September 14-15, 2005

International Symposium on Oil and Gas Activities in the Arctic

St. Petersburg, Russia
Fax: +47 23 24 16 31
Email: amap@amap.no
URL: www.amap.no

September 27 -29, 2005

AAAS Arctic Science Conference

Kodiak, Alaska
Phone: 907-486-1500
Fax: 907.474.5640
Email: smiley@sfos.uaf.edu
URL: www.arctic.aaas.org

September 28-30, 2005

Snow Change 2005 Workshop on Indigenous and Local Observations of Ecological and Climate Change

Anchorage, Alaska
Phone: +358-(0)3-2647-1111
Fax: +358 (0)3-2647-222
Email: tero@snowchange.org
URL: www.snowchange.org

September 30-October 6, 2005
8th World Wilderness Congress

Anchorage, Alaska
Phone: (805) 640-0390
Fax: (805) 640-0230
Email: info@8wwc.org
URL: www.8wwc.org

October 3-9, 2005

North Pacific Fishery Management Council

Anchorage, Alaska
Phone: 907-271-2809
Fax: 907-271-2817
Email: Shannon.Vivian@noaa.gov
URL: www.fakr.noaa.gov/npfmc

October 9-13, 2005

Human Dimensions of the Arctic System (HARC)

Bonn, Germany
Phone: 907-474-6751
Fax: 907-474-7453
Email: ffmsm@uaf.edu
URL: www.openmeeting.homelinux.org

October 13-16, 2005

Bioneers 2005

University of Alaska Anchorage
Anchorage, Alaska
Phone: 907-373-0909
Email: info@sustainak.org
URL: www.sustainak.org

October 17-22, 2005

Alaska Federation of Natives Youth & Elders and General Assembly

Fairbanks, Alaska
Phone: 907-274-36114
Fax: 907-276-798
URL: www.nativefederation.org

November 5-9, 2005

American Public Health Association: American Indian, Alaska Native, Native Hawaiian Caucus

New Orleans, Louisiana
Phone: 202-777-2476
Email: apha@laser-registration.com
URL: www.apha.org

November 8-9, 2005

Workshop: Arctic Sea Ice Thickness: Past and Present

Copenhagen, Denmark
Email: o.low@damtp.cam.ac.uk

December 5-11, 2005

North Pacific Fishery Management Council

Anchorage, Alaska
Phone: 907-271-2809
Fax: 907-271-2817
Email: Shannon.Vivian@noaa.gov
URL: www.fakr.noaa.gov/npfmc/

June 12-16, 2006

The 13th International Congress on Circumpolar Health

Novosibirsk, Russia
Phone/Fax: +7-3832-324339
Email: icch13@soramn.ru
URL: www.ict.nsc.ru/ws/icch13

ALASKA NATIVE SCIENCE COMMISSION

429 L Street
Anchorage, Alaska 99501
Phone: 907-258-2672
Fax: 907-258-2652
Email: info@aknsc.org
www.nativescience.org
www.nativeknowledge.org



Alaska Native Science Commission Staff

Patricia Cochran
Executive Director
pcochran@aknsc.org

Ilarion (Larry) Mercurieff
Deputy Director
lmercurieff@aknsc.org

Nancy Edtl
Business and Program Manager
nedtl@aknsc.org

Leslie Hsu Oh
Communications and Information Technology Manager
loh@aknsc.org

Aaron Peters and Christina Salmon
Student Interns
intern@aknsc.org

Mission: To endorse and support scientific research that enhances and perpetuates Alaska Native Cultures and ensures the protection of indigenous cultures and intellectual property. To provide information to Alaska Native Communities regarding science and research that impacts their health, life, culture and environment.

For questions, comments, submission of articles or to be added to our mailing list, contact Leslie Oh at loh@aknsc.org or 907-258-2652. ANSC reserves the rights to all submissions for content and editing.



NSF Support & Disclaimer

This material is supported by the National Science Foundation under Cooperative Agreement No. OPP-0231085. Any opinions, findings, and conclusions, or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.