

Laurie Richmond  
Consortium on Law and Values Health, Environment, and the Life Sciences  
Research Report: Summer and Fall 2006

I received a 2006 Grant from the Consortium on Law and Values in Health, Environment, and the Life Sciences to help fund preliminary work necessary to develop my research project tentatively titled: A Collaborative Exploration of Environmental Change and Alaska Native Fishing Communities. For my dissertation research, I plan to work with Alaska Native communities to develop a cooperative environmental research project. My dissertation will result from a participatory action research project developed in partnership with Alaska Native communities to explore climate change and indigenous fisheries. I am interested in combining biological information I collect about fish populations (or other environmental conditions) with traditional knowledge about the history of fisheries and the surrounding ecosystem.

I received three different sources of funding for my summer research. In addition to the \$2,000 of Consortium on Law and Values in Health, Environment & Life Sciences research money, I received \$2,500 of research funds provided by the MacArthur predissertation program. I also received a living stipend from the Fisheries and Wildlife Dobie fellowship program. Therefore I had \$4,500 of research expense money. I have outlined the total costs from my research summer and attached it as an addendum to this paper.

The majority of the research monies were used to fund travel and living expenses in Alaska. The research money enabled me to travel extensively within the city of Anchorage in order to meet with important contacts within the Alaska Native and fishing

communities. In addition, the funds allowed me to travel to three different remote fishing villages in Alaska in order to talk with tribal council members, tribal officials, and local people, about my research ideas. Finally, I used the money to make a fall trip to Seattle to visit with the International Pacific Halibut Commission to work on developing a partnership for the development of the science aspects of this project. This preliminary summer and fall work was essential for me to establish the necessary relationships with communities in order to develop a cooperative research project. Ultimately, I will only pick one community to work closely with as a part of my dissertation. But by visiting several different villages, I was also able to gain a large scale understanding of some of the forces acting on tribal fishing communities and the regional perspective on climate change. The information that I have gained from other communities will be helpful in developing research no matter where I end up establishing a more permanent research relationship.

### **Research Activities and Discoveries:**

The following is a summary of my research activities for the summer of 2006. I spent the summer in Alaska attempting to make community contacts and to develop a cooperative starting place for the development of the project.

(1) Anchorage - I spent the first month of the project almost entirely in Anchorage.

There I met with different Alaska Native organizations, corporations, government officials, and halibut fishing interests. These meetings gave me a base and helped me develop contacts with specific Alaska Native communities. Specifically, I met with

members of the Alaska Native Science Commission, the Koniag Corporation, the Aluetian Pribilof Island Association, and several environmental NGO's.

After I developed contacts through my work in Anchorage, I visited three different Alaska Native villages – all of which seemed interested in my project (and all of whom knew that I was looking at other communities and might not end up doing my research there). Each village had a different feel and presented different potential directions for my research project. I felt that there were benefits and drawbacks to working with each of the communities.

(2) Aleut Community of St. Paul Island (about 500 people) – St. Paul island is a Pribilof Island in the middle of the Bering Sea and it houses the largest population of Aleuts in Alaska. There are a number of scientists that do research on the island – studying the fur seal and shore bird populations among other things - though it was my experience that the research was fairly separate from the community. The elders have a lot of knowledge about halibut and the surrounding environment and a lot of this information is not being passed down. Aquilina Lestenkof, the director of the environmental office and my contact there, suggested that my project could be a means to begin community communication and reflection on environmental changes. In addition, St. Paul has an amazing and unique community based fishery. They have been experience recent localized depletion in the halibut and think that my science research might be able to provide some insights about the decline.

This island it located in the middle of the Bering Sea, which has been experiencing large scale environmental changes – likely a result of climate change,

intense fishing pressure, as well as natural factors. The inhabitants have a record of this change and there are several island members who advocate for climate change related issues.

(3) Port Graham (pop about 170) – This is a village across the Katchamek bay from Homer, AK. It is a 30 minute boat ride from another village called Nanwalek. If I did research here I could do research in both villages. These villages still very much practice subsistence catch of halibut (in St. Paul halibut fishing is almost entirely commercial) and this bay has been inhabited by their Alutiiq ancestors (in a nomadic fashion) for centuries. Port Graham has done a lot of work obtaining and documenting “traditional knowledge” from elders and other community members. They had a researcher work with the village on a multi-year project looking at traditional use of badarki (a type of shellfish traditionally eaten by the community) and conducting science studies of badarki in the bay. This project was very successful and has made the community want to work with researchers in other areas. They are interested in a project surrounding halibut. The two villages are thinking of developing a small commercial fishery, so research about halibut and climate and traditional use of halibut could be helpful in develop a plan for expansion of the fishery beyond the subsistence level. These villages seemed most concerned about the Homer charter halibut fishing industries which have been dramatically increasing in number and in presence near the villages.

(4) Old Harbor (pop about 280) – Old Harbor is a village located on Kodiak Island. Village members are involved in both the commercial fishery and the subsistence fishery. There are a lot of fish politics in this community, surrounding the rationalization

of the halibut fishery and the distribution of quotas. The village is very enthusiastic about maintaining their subsistence way and passing tradition along to the youth. They have developed a series of summer camps where the youth can learn about subsistence, native arts and crafts, traditional knowledge from the elders, and even basic marine biology. I was able to attend their marine biology camp and give a brief presentation about my research to the local youth. In addition, I was able to participate in subsistence fishing (for salmon and halibut) activities. Despite these strong programs, the village does not have an environmental program at all, and they are just in the process of developing one (by applying to the EPA grant). With my background in tribal environmental programs, I could possibly help with the development of their program. Also, I think that research into traditional knowledge and mapping of traditional use areas could be very collaborative and provide outcomes important to tribe. Old Harbor is a friendly and open community and for that reason they have worked with many different researchers in the past – but I am not sure how many have done a community-based approach. There is currently a University of Washington graduate student studying the impacts that the switch to a quota based fishery had on all of the different villages on the island. My understanding is that when the halibut fishery turned to a quota based system, the distribution of quota heavily favored large industries and small native fishing village throughout Kodiak were devastated.

(5) International Pacific Halibut Commission (IPHC) port samplers – I also had the opportunity to visit Pacific halibut port samplers both on St. Paul Island and in Homer, AK. These samplers gave me a lot of important information about the halibut

fishery and about how the IPHC data collecting program works. For the scientific component of my research, I will be using IPHC historical specimens in order to learn about how climate affects fish populations. Therefore it was important for me to learn about their sampling methodologies as well as collect a few samples to bring back for examination in our lab.

(6) In the fall of 2006, I traveled to Seattle, WA in order to meet with members of the International Pacific Halibut Commission scientific staff. During this trip I developed a research relationship that will enable me to work with their scientists and their historical otolith collection in order to conduct a scientific study of halibut and climate interactions in a specific region of Alaska. IPHC has agreed to provide me with office space, staff expertise and access to the otoliths collections and equipment during my work on this project.

### **Impact on Dissertation:**

The research activities conducted this summer and fall will have a tremendous impact on my dissertation. Primarily, it enabled me to develop a strong relationship with many people working in the Alaska Native and halibut fishing communities. These are the types of relationships that cannot be created over the phone. With these funds, I was able to develop potential research relationships with three different villages. In each location I spoke with tribal council members and paved the way for my project to be conducted smoothly and collaboratively in the future. This is essential for any work being conducted with native communities.

In addition, I had significant interaction with community members in each of the villages. I conducted informal interviews and participated in local activities. These activities gave me a brief window into the communication patterns and community structures of the villages. The information will be invaluable as I begin to develop research methods that are appropriate and as I begin to think about the kinds of questions that I hope to ask in the future. For each village, I think that my project will have a slightly different slant, based on community needs and logistics. By visiting and interacting with the communities, before I completely develop my research methods, I will be able to develop methods that are more appropriate and effective. As I visited each village, I thought a lot about community memory surrounding environmental change. It will be interesting to explore of these subsistence villages process and express changes that they have seen in the environment. I observed that most of the villages I visited were coastal and not extremely far north. Therefore, the effects of climate change will be less dramatic. I will need to develop research methods that are more sensitive to subtle changes in the environment. It will be interesting to view how and if these communities express changes in the environment and to what extent they call on the modern, political understandings of climate change. The climate of that region has experienced dramatic shifts (some of which were natural) and it will be interesting to explore how the community remembers and processes those shifts as well as how they have adapted to large scale changes in the environment.

Finally my trip to the Halibut Commission funded through these Consortium funds was essential for developing the groundwork for a research relationship that will allow me to conduct biological investigations of the halibut fishery alongside social ones.

### **Research Expenses:**

#### *Air Travel:*

Boston-Anchorage Flight: \$477.30  
Flight Change: \$130.00  
Anchorage-St. Paul: \$902.00  
Homer-Port Graham: \$104.00  
Anchorage-Kodiak: \$400.00  
Kodiak-Old Harbor: \$140.00  
Minneapolis-Seattle: \$291.67  
Total: **\$2,444.97**  
2444.97

#### *Ground Travel:*

Airport Taxi: \$24.00  
Airport Parking: \$51.08  
Vehicle Expenses: \$358.95  
Total: **\$434.03**

#### *Hotel Accommodations:*

St. Paul: \$975.00  
Port Graham: \$350  
Seattle: \$296  
Total: **\$1621**

**GRAND TOTAL: \$4,500**