

## EVOS ANNUAL PROJECT REPORT

**Project Number: 060610**

**Project Title: Kodiak Archipelago Youth Area Watch**

**PI Name: Teresa (Teri) L. Schneider**

**Time Period Covered by Report: October 1, 2005 – August 31, 2006**

**Date of Report: September 29, 2006**

### 1. Work Performed:

Initial site planning to create a yearlong plan began with a follow up to the 2005 Academy of Elders/Science Camp that took place throughout the fall season. Students in many sites began the design of their individual or small group science exploration and included:

Port Lions

1. Raw fats – comparing fat content of fish, deer, and duck
2. Kodiak's cattle and ocean pollution – determining the effect that cattle may have had on changes of the island's environment, including plant growth
3. Pollution on local beaches – a survey of the kinds of pollution that are on local beaches and what can be done to limit the pollution

Ouzinkie

1. Potential energy in and around Ouzinkie including water and wind energy sources
2. Health effects of diet changes in Ouzinkie residents – older people relying heavily on subsistence while the youth rely more on store bought products

Larsen Bay students conducted experiments to compare various oil as a heat and light source, including whale oil and canola.

Old Harbor students conducted research to compare the heat value from various driftwood, boiling points of tap water and salt water, as well as discovering the life cycle of the starfish and the snowshoe hare.

Chiniak students conducted research to compare the insulating value of modern housing and Alutiq ciqluaq (house), the rate at which various types of driftwood are able to dry before burning as a heat source, and the value of well water compared to reservoir water as a drinking source.

It was also determined that because of reduction in staff, our students would not be producing an entire Ilunai magazine this year, but rather, would continue to produce and collect TEK and stories with hopes and plans to produce an oral history magazine in the future.

The *Salmonoid Education Project* continues to be developed and implemented in Kodiak, Ouzinkie, Port Lions, Larsen Bay, Akhiok and Old Harbor. The following tasks were performed and supported by the KAYAW project:

- Established licensing for each community
- Contacted each community’s Tribal Council via letter requesting their participation and permission to complete the salmon education project in their community
- Egg-takes were performed in cooperation with ADF&G personnel from Juneau, Kodiak and Anchorage, community members and students in Larsen Bay, Port Lions and Old Harbor. Akhiok and Ouzinkie egg takes were unsuccessful, so those sites received eggs from ADF&G for incubation. Chiniak opted not to participate in project.
- Set up the aquarium in each participating site
- Followed through with the incubation process
- Completed dissections and fish prints while studying the internal and external aspects of the fish, including perspectives and language from Elders and local experts
- Presentations were made by Fritz Kraus and Craig Baer from ADF&G, Anchorage
- Students followed up throughout the incubation process [regular water exchanges, maintained tank temperature to parallel conditions to wild stock, documented the temperature units (TUs) daily and predicted egg development]
- A particular class in each of the schools took on the responsibility of maintaining the equipment while taking care of the eggs
- Several teachers took the three, 1-credit classes that supported their involvement (egg take, incubation, release)
- Students released fish back into the wild at their original location
- Students from Port Lions and Old Harbor participated in the Kodiak Community “Coho Carnival”
- Planning to pilot this in one of the rural sites next spring
- Photos may be viewed at the following website:  
<http://kodiakstudents.koc.alaska.edu/vision/coho/powerpoint.html>

The Rural Regional Science Fair took place in the village of Ouzinkie, January 2006. Twenty five projects were chosen to participate from our various communities after project review from their local Elders and teachers. Also participating were science judges and Elder judges. Some of the placed based science projects shared included the following:

Roberta Anderson Kirstin Bennett-Balluta	Ouzinkie	Potential energy in and around Ouzinkie	Team Experiment
Aaron Koch	Chiniak	Momentum	Experiment
Gwendolyn Christiansen	Old Harbor	Heating a banya	Experiment
Jasmine Larionoff	Old Harbor	Boiling Points of Different Types of Water	Experiment
Dallas Dominguez	Chiniak	20,000 Leagues into the Wells	Experiment
Sierra Squartsoff	Ouzinkie	Health effects of changes in Ouzinkie residents’ diet	Experiment
Charlie Carlson	Larsen Bay	What are magnets?	Experiment
June Anderson	Ouzinkie	How important is air pressure to Alutiiq people	Experiment

Seth Patterson	Chiniak	Liquid Vs. Solid Insulators	Experiment
Alyssa Brenteson	Akhiok	Smoking's effect on lung capacity	Experiment
Wylder Clarion	Ouzinkie	Building an electric motor	Experiment
Joseph Christman	Chiniak	Shocking Food	Experiment
Roslyn Delgado	Ouzinkie	Exploring Pick's Theorem	Experiment
Chloe Hawkins, Kaily Shugak, Katherine Clough	Old Harbor	How far do germs spread in the air?	Team Experiment VIDEO
Lateasha Naumoff	Old Harbor	Starfish	Demonstration VIDEO
Marn Elvehjem	Old Harbor	Snowshoe Hares	Demonstration VIDEO
Steven Shugak	Old Harbor	Wood Burning	Experiment VIDEO
Melissa Arnold	Chiniak	Black Ink	Experiment VIDEO
Nickolas Zharoff	Chiniak	"Wood" you like it wet or dry?	Experiment VIDEO
Keanna Bendixen Marquee Strong	Port Lions	Raw Fats	Team Experiment VIDEO
Hunter Byron Peter Squartsoff	Port Lions	The Ocean/Cattle Report	Team Demonstration VIDEO
Katie Strong Cierra Robustellini	Port Lions	Is trash polluting your beach?	Team VIDEO

Each student is required to show how their project or study is relevant to the culture and/or environment of our island community, thus much of what is shared is highly interesting to the visiting community and full of information of local use. Projects include background information gathered from local Elders and experts.

The three-day event included further student training on the scientific method and traditional science used by Elders.

Archaeological site surveys, preservation and maintenance projects have been performed by the Alutiiq Museum and Archaeological Repository staff in the communities of Chiniak, Old Harbor, Larsen Bay, Akhiok, Ouzinkie, Kodiak and Port Lions throughout the late winter and early spring of 2006. Students learned of traditional harvest techniques for wood and the skills needed and purposes for making bentwood boxes.

Some harbor seal and sea lion bio-samples were sent directly from Akhiok and Old Harbor to Vickie Vanek throughout the year though no records were sent to the coordinator.

Students reported sea mammal sightings during Whale Fest in April and submitted those directly to the Whale Fest coordinators.

Four archaeological interns were hired through KAYAW to work with Museum staff during the 2006 Community Archaeology Project in July and August. Three of the four students earned ½ high school credit while working, completing a daily journal, readings and a final report.

The Academy of Elders/ Science Camp took place this summer, June 19-June 23 and included Elders, scientists and teachers. The primary focus of study during this week was the Science of Survival and included the identification, use and harvest of medicinal and edible plants. By the end of the week every person took part in the production of a medicinal salve and a salad for the meals throughout the week. The curriculum used during this particular camp was that developed by members of the Native Educators of the Alutiiq Region.

## **2. Future Work:**

Staff continues to explore research and project opportunities for students. The coordinator hopes to complete site plans with each school to develop an area of concentration or theme of study at the local level, perhaps building on projects already taking place at the community or tribal level.

More work is being done to align KAYAW activities with the local Rural School's Integrated Science Curriculum that is in use for the fourth year. With the state adding science to the Benchmark Exams and High School Qualifying Exam in 2006-07, staff will continue to re-align KAYAW activities/projects with the soon-to-be revised State Science Content Standards, Grade Level Equivalencies and the local district's curriculum to be reviewed in 05-06. The KAYAW coordinator will take part in the District's science review committee to ensure that place based education continues to be a focus through its science education opportunities.

KAYAW site plans are currently being developed now for the 2006-07 academic year. At this point, these include the continued effort to incubate local salmon species throughout the winter, development of individual and group science projects, watershed monitoring and mapping, harvesting salmon and processing to contribute to local Elders, continued gathering of traditional ecological knowledge with publication in the Iluani magazine, sharing, teaching and practice of traditional cultural knowledge through the Alutiiq Museum's outreach.

## **3. Coordination/Collaboration:**

Coordination and collaboration continues to be extensive with the Alutiiq Museum and Archaeological Repository and the School District through the development of the summer intern employment, village outreach, and with the Museum being the final storing place for all oral histories gathered, as well as photos and other objects. Students continue to present locally to Tribal Councils and post information in public places for community members to read. Outreach to Elders and local experts comes in the form of interviews for the oral history magazine, inclusion as judges in science fairs, participation in science camp, etc. The Native Village of Afognak and the District continue to collaborate in the development and continuation of the Academy of Elders/Science Camp and curriculum development. Coordination efforts for student projects and site studies continue through the efforts of the Alaska Department of Fish and Game, the National Marine Fisheries, the community of Old Harbor, and the Woody Island Tribal Council.

#### 4. **Community Involvement/TEK & Resource Management Applications:**

Students submitting projects to the Rural Regional Science Fair must show evidence of consulting with local TEK experts and/or Elders regarding their topic of study. Students must acknowledge the individual's contributions in their work. The oral history magazine continues to use guidelines developed, in part, during the TEK workshop with Huntington Consulting three years ago and the Guidelines for Respecting Indigenous Knowledge developed by Native educators throughout Alaska. All original interviews and photos from the Iluani project will be housed at the Alutiiq Museum and made accessible to future researchers. Tribal Councils were involved in the Salmonoid Education Project from the beginning.

#### 5. **Information Transfer:**

- GLOBE postings have been made throughout the academic year, primarily from Kodiak City, Old Harbor and Ouzinkie.
- Project Website design is still in process and can be viewed on the KIBSD website (<http://www.kodiak.k12.ak.us/ruraloff/default.htm>) and at <http://kodiakstudents.koc.alaska.edu/vision/coho/powerpoint.html>
- Rural School's Students. (2005). *Iluani*

#### 6. **Budget:**

No major differences or problems occurred between actual and budgeted expenditures.

**Report Prepared By: Teresa L. Schneider**

Project Web Site Address: <http://www.kodiak.k12.ak.us/ruraloff/default.htm>