

The Outer Coast Project: Oral History and Archaeology of Kenai Fjords National Park

**Proposal to the Ocean Alaska Science and Learning Center Program
National Park Service
February 18, 2002**

**Aron L. Crowell
Arctic Studies Center, Alaska Office
National Museum of Natural History
121 W. 7th Ave.
Anchorage, AK 99501**

I. Project Summary

In collaboration with Alutiiq (Alaska Native) villages and the Pratt Museum (Homer), the Arctic Studies Center (National Museum of Natural History, Smithsonian Institution) will investigate the cultural and environmental history of Kenai Fjords National Park (KEFJ). Artifacts and faunal samples from excavations at Aialik Bay archaeological sites, combined with oral histories and traditional knowledge about coastal subsistence practices, will provide data on ecosystem change and human responses during the Little Ice Age (A. D. 1250-1900).

II. Abstract

Archaeological sites along the coastline of KEFJ document ancestral Alutiiq occupation by A. D. 200 and a human presence as early as 7500 B.C. is plausible. The cultural history of the park is in fact poorly known although probably similar to adjacent Prince William Sound, Kachemak Bay, and the Kodiak archipelago (Crowell et al. 2001; De Laguna 1956, 1975; Workman 1980, 1998). Building on previous work (Crowell and Mann 1996, 1998) we propose to document the human and environmental history of KEFJ through a combination of archaeological excavations and oral history. Participants in the project include residents of three contemporary Alutiiq villages (Nanwalek, Port Graham, Seldovia) whose ancestors lived in the outer Kenai coast study area until the 1880s and harvested subsistence resources there on a seasonal basis through the mid-20th century (Stanek 1985, 1999).

A key research focus is on ecosystem conditions and human adaptations during the Little Ice Age (A. D. 1250-1900). Paleoenvironmental and geological studies in KEFJ and the central Gulf of Alaska have documented atmospheric temperatures that were cooler than present during the Little Ice Age (LIA), accompanied by glacial advances (Wiles 1994; Wiles et al. 1996). Over shorter time spans, climate-forced fluctuations in sea surface temperatures (SST) correlate with complex changes in ocean circulation and alternation between “warm” and “cold” biological regimes in the North Pacific (Francis et al. 1998). “Cold regime” circulation and SST patterns between 1976 and the late 1990s favored high productivity of Gulf of Alaska salmon while populations of seals, sea lions, and

some sea birds plummeted (Beamish and Bouillon 1993; Finney et al. 2000; McGowan et al. 1998).

While ocean-atmosphere linkages in this system are only partially understood, archaeological data may shed light on the dynamics of ecosystem change over many centuries. Excavations on Kodiak Island (Knecht 1995) suggest a pronounced increase in prehistoric salmon harvesting at the onset of colder LIA conditions accompanied by reduced sea mammal consumption. This trend is consistent with conditions in the Gulf of Alaska over the past 30 years. We suspect that many centuries of depressed temperatures during the LIA may have sustained a “cold phase” marine ecosystem to which human hunting and fishing populations in the Gulf of Alaska became specifically adapted. Archaeological middens in Kenai Fjords National Park contain time-stratified samples of marine species for the entire LIA and represent an extremely valuable record of both human subsistence strategies and environmental conditions during this era.

Oral traditions may play an equally important role in understanding human responses to the LIA. Tlingit oral traditions (de Laguna 1972) recount the advance of glaciers at the height of the LIA in the 18th and 19th centuries as well as out-migration from Icy Strait and Glacier Bay when advancing ice and isostatically-depressed shorelines rendered the area uninhabitable. Alutiiq traditions recorded at Nanwalek and Port Graham (Stanek 1999) recount ancestral migrations along the outer Kenai coast during the same time period and the abandonment of most outer coast villages by the 1880s.

III. Project Description

A. Project Need

Increased knowledge about the human and environmental history of the coast is desirable to the Native heirs of the region’s cultural traditions, to the scientific community, and to park visitors. Enhanced understanding of the park’s cultural resources will be valuable for management and public interpretation.

Research partnerships with local communities will ensure that indigenous rights and values are respected and that local knowledge and cultural insights enrich the interpretation of data (see Swidler 1997, *Native Americans and Archaeologists: Stepping Stones to Common Ground*). Preparation for the proposed project, funded by the Alaska Humanities Forum, has included village planning meetings (March 2001) and a site visit with elders and students to the research area (June 2001). By participating in field studies during the summer of 2002 Alutiiq students will learn scientific skills and participate in research about their own heritage.

The project addresses specific data needs in several disciplines of the social and natural sciences. Previous reconnaissance-level archaeological surveys have identified the locations and approximate dates of prehistoric camps and village sites but did not include more than minimal subsurface sampling. Present data are therefore inadequate for interpretation of cultural affiliations, historical development, economy, demography, or

subsistence practices of ancestral residents. Historical data on the outer coast villages are also limited (Cook and Norris 1999). Oral traditions recorded by elders in the lower Cook Inlet villages (Stanek 1999) describe 19th century life in Aialik Bay, Nuka Bay, and other localities, but more interview work with a passing generation of elders needs to be undertaken. This was illustrated during preliminary Outer Coast Project discussions with village residents, during which several important new accounts were elicited.

Controlled excavations will also yield samples of marine shell and sea mammal, fish, and bird bones that accumulated during eight centuries of human subsistence activities. These samples will provide the basis for interpreting changes in human foraging patterns, shifts in the relative abundance of marine species, and changes in the morphometry of ancient and modern populations of sea lions and other animals.

B. Objectives

The project provides strong support for OASLC program objectives. Learning and sharing of information derived from the protected resources of Kenai Fjords National Park define the basic agenda. The primary objective of the research is to better understand how indigenous economy and society were integrated with the resources and rhythms of the natural ecosystem.

A related purpose of the Outer Coast Project is to acquire specific data on the age, extent, structure, visibility, and research potential of archaeological sites. This information is relevant to decisions regarding future priorities of investigation. It is also critical for the management of risks to cultural resources. Risk factors include natural processes (e.g. wave and stream erosion) as well as human actions that can include oil spills, construction, amateur collecting, and deliberate vandalism.

Objectives also include promulgation of results to a large and diverse audience. A primary tool for this purpose will be a professionally produced 10-minute film (Weston Productions) to include footage of the field research in progress, discussion of the outer coast environment from a Native perspective, interviews with researchers, Alutiiq elders, and students, and an overview of the area's history and culture. It will be suitable for presentation at the Kenai Fjords National Park visitors center, at public programs and conferences, in schools, and at the Pratt Museum, SeaLife Center, and Chugach Alaska cultural center in Seward.

The Pratt Museum (Homer) has applied to the Institute for Museum and Library Services (IMLS) for \$13,000 in additional video funding for the Outer Coast Project. It will include filming of interviews of elders and project-related community meetings in Nanwalek, Port Graham, and Seldovia.

Peer-reviewed scientific publications on the project will contribute to the increasingly urgent and inter-disciplinary exploration of high latitude ecosystems and climate change, exemplified by the Arctic System Science Program (ARCSS), the Study of Environmental Arctic Change (SEARCH), and Human Dimensions of the Arctic

(HARC) initiatives managed by the National Science Foundation as well as the Global Ocean Ecosystems Dynamics (GLOBEC) program. In partnership with the University of Alaska, Anchorage, the Arctic Studies Center will apply for National Science Foundation support for the Outer Coast Project in 2003-5. In subsequent years we hope to expand the geographic scope of the research to include Harris Bay, Nuka Bay, and areas west of the park boundary as far as Cape Elisabeth.

C. Methodology

Using standard excavation techniques, we propose to sample the well-preserved faunal midden _____ on the east side of Aialik Bay. The site is on KEFJ land.

Time, logistics, and permissions allowing, we will also work at another site.

Comparative work at both sites would be ideal because the occupation dates at the first site (about 1400 A.D.) correspond to an early phase of the LIA whereas the other village site was used at an advanced stage (about 1800 A.D.). Both sites include remains of indigenous dwellings and detailed maps of the terrain and cultural features have been published (Crowell and Mann 1998).

Based on previous sub-surface tests, we anticipate that block excavations of approximately 4 x 6 m placed in the midden areas at both sites will reveal cultural features and yield large samples of artifacts and faunal material for analysis. For example, over 5000 pieces of faunal material were collected from two 1 x 1 m test pits at XBS-029 in 1993, including seal, Steller sea lion, Dall porpoise, sea otter, halibut, Pollock, salmon, cod, rockfish, cormorant, rhinoceros auklet, and a variety of bivalves.

Excavations of the suggested size will meet research needs while reserving more than 90% of each site for future studies or indefinite preservation. Radiocarbon dates from charcoal will provide chronological control of the stratigraphy, particularly for the prehistoric levels at _____. Radiocarbon dates are problematic in the time range represented by XBS-029, the more recent of the two sites (approximately 200 years old), although date estimates can be derived from time-sensitive artifact types including Russian trade beads. Locations of all artifacts, bones, and cultural features will be mapped in three dimensions in relation to a fixed, permanent datum stake previously established at each site.

The field research team will be under the direction of Principal Investigator Aron Crowell and include a research assistant and three to five undergraduate or graduate students from the villages of Nanwalek, Port Graham, and Seldovia and from the University of Alaska. The team will require logistical support from the KEFJ vessel *Serac* to establish base camps at Bear Cove and Verdant Cove during June – July, 2002. KEFJ staff will coordinate with the project on issues of supply, safety, and communications.

Analysis of the artifact collections will be conducted at the Arctic Studies Center in Anchorage under the direction of Aron L. Crowell. Stylistic and technical attributes of stone and bone tools are indicative of human activities, subsistence strategies, and cultural contacts. Analysis of the faunal materials will be undertaken under the direction

of David Yesner through a cooperative arrangement with the Department of Anthropology, University of Alaska, Anchorage. The relative abundance of species in stratified midden samples can indicate seasonality of site occupation as well as changes in species abundance and harvest strategies over time. Special studies will include morphometric analysis of sea mammal and fish elements to determine body size trends.

Preliminary work on the oral history component of the project has already been conducted. Pre-existing sources include oral narratives by Joe Tanape, Walter Meganack, Sr., Elenore McMullen and others that refer to the outer coast settlements (Alaska Department of Fish and Game, Native Village of Nanwalek, and Native Village of Port Graham 2000; Stanek 1985, 1999). In addition, there is a preliminary survey of Alutiiq place names (Leer 1980). Many of the 30 known archaeological sites on the outer coast can be at least tentatively linked to references in historic records or oral tradition.

Funds awarded by the Alaska Humanities Forum in 2001 allowed Crowell, Leer, Stanek, and Gale Parsons of the Pratt Museum to visit the three lower Cook Inlet Alutiiq villages to discuss outer coast history with elders and to invite public discussion of archaeological research plans. In June, 2001 Crowell, Leer, and Parsons visited Aialik Bay sites accompanied by elders Feona Sawden, Luba Moonin, and Natalie Kvasnikoff and by Alutiiq students Sperry Ash, Kevin Seville, and Robert Kvasnikoff. Discussions in the villages and in Aialik Bay were recorded and transcribed for research use and development of educational materials. The result of these contacts is access to a body of oral tradition concerning the history of occupation, migration, and subsistence use of the study region. We anticipate that additional accounts can be recorded as broader village participation in the project is developed.

D. Management Implications

From a management perspective, archaeological sites are a scarce, irreplaceable, and endangered resource of high scientific and cultural value. Controlled archaeological sampling secures the multiple values of this resource without destroying it. Interpretation of sites in collaboration with indigenous residents adds important dimensions of expert local knowledge and oral tradition. If knowledge derived from archaeological investigations and community-based studies is effectively communicated, the net result is increased public awareness of the value of cultural resources and cooperation in their protection.

As wilderness usage of the park increases, more and more kayak parties are camping at the exact locations that Alutiiq residents also found convenient for settlement. While most visitors do not recognize the presence of archaeological sites, the potential for deliberate or inadvertent damage is increasing. A program of visitor education about the value of archaeological sites may be one of the best strategies for their protection. Restricted access to some areas might also be considered.

A effective program combining site investigation and protection can be only created through collaborative efforts involving researchers, Native communities, educational and

cultural institutions (including the Pratt Museum, Chugach Alaska, and the SeaLife Center), and the general public. The Outer Coast Project will help to establish the information and lines of communication necessary for this process.

E. Evaluation

The principal investigator will prepare a preliminary report on scientific results of the research for Kenai Fjords National Park review by February, 2003. Detailed results and interpretations will be evaluated through peer review of journal articles and other publications. The project video will be edited and complete by March 2003. Under terms of our Alaska Humanities Forum planning grant, Gale Parsons of the Pratt Museum will prepare a written evaluation of Native community planning and participation. Student participants in the project will be asked to keep a field diary and to contribute to an informal video record of the field research. The Arctic Studies Center will work with OASLC staff to develop public programs about the project and to evaluate public impact and interest.

F. Results of Previous OASLC Research – N/A

See publications for results of 1993 archaeological and geological survey work in the study area (Crowell and Mann 1996, 1998; Mann and Crowell 1996).

G. Education

Native community goals for participation were defined during meetings at Nanwalek, Port Graham, and Seldovia in March 2001. These included student training, publications, and media materials for use in schools as well as exhibits for community display facilities.

Our request includes partial funding for an Aialik Bay field visit by elders and other village residents in July 2002 to examine and discuss the archaeological findings at the sites. Funds remaining in the Alaska Humanities Forum grant will help to support this component.

We propose to hire 3 – 5 field assistants for the first season of field excavations, and will recruit candidates from Nanwalek, Port Graham, and Seldovia as well as the University of Alaska. The experience will provide an intensive exposure to archaeological research methods and complement courses of study in anthropology, history, natural sciences, resource management, and history. The Principal Investigator is an affiliate faculty member of the Department of Anthropology, University of Alaska Anchorage, and can supervise the fieldwork for independent study credits. In subsequent years we anticipate developing the project as a programmatic initiative of the University of the Arctic, with participation by international students from circumpolar countries.

If possible, we would like for teachers or Chugach School District curriculum developers to become involved in the project. Presentations at the three Native communities would be planned, as well as a possible public event at the SeaLife Center.

IV. Summary Justification for OASLC Funding

The following are direct benefits of the Outer Coast Project to Kenai Fjords National Park, its resources, visitors, and local communities:

- New and critical scientific data regarding cultural resources located within the park on federal land
- Increased understanding of the outer coast ecosystem and its history
- Integration with high priority research themes for arctic and sub-arctic regions, including climate change, indigenous knowledge, and interdisciplinary modeling of high latitude ecosystems (cf. ARCUS 1999 and National Science Foundation programs including ARCSS, HARC, and SEARCH)
- Outreach to historically affiliated indigenous communities
- Communication and cooperation with Alaska Native stakeholders and land owners
- New institutional affiliations through OASLC to the Smithsonian Institution, University of Alaska, and the Pratt Museum
- Student training and career development
- Information and media for visitor and community-focused interpretation and public programs
- Management and protection of cultural resources through public education and policy development

V. Citations

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Anticipated Partners

Anticipated Partners	Contribution Amount	(F)ederal or (N)on-Federal	Cash or Contributed (G)oods and Services	(A)pplied for, (P)ledged, or (I)n-hand
National Museum of Natural History	33210	F	G	P
Smithsonian Radiocarbon Fund	3100	F	C	A
Arctic Studies Center	2600	F	C	I
English Bay Corporation	15000	N	C	A
Pratt Museum (IMLS grant)	13000	F	C	A
Alaska Humanities Forum	1500	F	C	I
Student volunteers	9600	N	G	A

Budget (Short Form)

See detailed budget (attachment)

	Federal Match	Qualifying Challenge Funds - Cash	Qualifying Contributed Challenge Funds	Total
	OASLC	EBC		
Salaries				
Research assistant	8000			8000
Student salaries	7200	12000		19200
Student volunteers			9600	9600
Contracts				
Video filming and post-production	13000			13000
Faunal analysis	3000			3000
Supplies				
Boat gas - Serac	1000			1000
Field supplies	3500			3500
Food supplies for field crew	3500			3500
Travel				
Student travel	500			500
Travel for community presentations		1000		1000
Elder/teacher visit to field project		2000		2000
TOTALS	39700	15000	9600	64300

Principal Investigator

Aron L. Crowell

Director, Arctic Studies Center

William W. Fitzhugh

Smithsonian Office of Sponsored Projects

Ardelle Foss, Director