Human Environmental Dynamics at Cape Krusenstern

200 Generations: On the Beach of Their Time

4200 – 2800 years ago
The earliest occupants of the Cape Krusenstern beach ridge complex camped seasonally, probably in the summer. They left behind small campsites that include hearths, stone tools, and debris from making stone tools. (Denbigh Flint complex)

2800 years ago
For the first time, at least one group of people lived most of the year at the beach ridge complex. They left behind a single unique settlement. The house forms and artifacts left at this settlement are unlike any other known site. A few large stone points from this site are interpreted by some archaeologists as early evidence of whaling activities and technologies. This topic is highly debated. (Old Whaling culture)

2800 – 2300 years ago
With the exception of the group living at the Old Whaling site, people continued to live at the beach ridge complex for short periods of time, perhaps from late spring to early fall. The artifacts and materials they left behind indicate an increased reliance on marine resources such as seals. Some of the oldest pottery, cooking vessel fragments, in Alaska are found at these sites. (Choris culture)

1750 – 1150 years ago
People began living at the beach ridge complex for longer periods of time over the course of a year. They built partially underground houses and had a new stone technology that differed from that made by people that came before and after them. Remains left behind show that seal was an important food for people during this time. Unlike previous inhabitants of Cape Krusenstern, these people did not make pottery, lamps or slate tools. Elaborate burials and artwork from this time are evidence of new religious and ceremonial practices. (Ipiutak culture)

200 years ago
People use the cape seasonally, staying at camps or visiting for the day from nearby towns and villages.

1000 – 550 years ago
During this period, people had tools and houses similar to those found at Point Hope, in Barrow, St. Lawrence Island, and even eastern Russia and Greenland. Much of the technology was focused on specialized marine mammal hunting equipment and there was clear evidence of whale hunting. People lived in big settlements, often in large houses with multiple rooms. This indicates a change in social organization that could have been related to the coordination and teamwork needed in whale hunting. People here still hunted seals as well as caribou, ducks, and other birds. They used kayaks, umiaks, dogs and dogsleds for transportation. (Thule culture)

300 years ago
People at Cape Krusenstern were connected to international trade networks. Although direct interaction with Europeans had yet to occur, glass trade beads and other historic material were found in sites here. Aside from this entry into global commerce, daily life probably did not change very much. People still made their living hunting seals, birds, and caribou, catching fish, and picking berries much like their ancestors. (Proto-historic period)

550 years ago
There was a shift in settlement patterns. Houses became smaller and are more dispersed so there were no longer large settlements. People adopted new fishing and bird-hunting technologies, including a greater variety of hooks and nets. (Kotzebue period)
Project Goals

The goal of this project was to study the timing and character of past human settlement at the Cape Krusenstern beach ridge complex.

A Unique Coastal Record

The beach ridge complex at Cape Krusenstern is one of the oldest and most continuously occupied coastal sites in the North American Arctic.

The beach ridges began to form when local sea level stabilized about 5000 years ago. Over time, beach ridges built outwards into Kotzebue Sound and the Chukchi Sea. During periods of past storminess, sections of land were also eroded away. Today, the beach ridge landform itself is a record of past storminess and coastal currents.

The Problem

Research in the 1950s and 60s established a timeline, or chronology, of human occupation at the beach ridge complex. The chronology was based on relatively few radiocarbon dates. Research was done on a large scale, but not systematically. This means some features, such as houses, were studied extensively, while others were not documented.

In the intervening years, spatial locations for many previously identified archaeological sites were lost. As a result, previously collected archaeological information could not be connected to new paleoenvironmental and archaeological data.

New radiocarbon dates and other data on past human settlement were needed to address questions about past human occupation at Cape Krusenstern.

Methods

Crews of archaeologists spent many months living and working at the beach ridge complex over a series of four field seasons: 2006, 2008-2010.

Field methods included systematically surveying the beach ridge complex and collecting new samples for dating and analysis through small test excavations.

Findings

Fieldwork yielded many new artifacts, features, and archaeological sites. More than 1200 archaeological features were recorded in systematic survey of about 2900 acres, 33% of the entire beach ridge complex.

Summary table of features and artifacts recorded by current project. In general, sites and artifacts found in Beach Segment VI are the oldest and those found in Beach Segment I are the youngest.

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<th>Feature Type</th>
<th>I</th>
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<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
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The number of new sites indicates that settlement was denser than previously thought. New radiocarbon data indicates that occupation was nearly continuous over the last 4200 years. There are very small gaps in the sequence of 247 dates, indicating that people used the landscape continuously.

Significance

These important findings support and refine the existing ideas about past human settlement at Cape Krusenstern, and further our understanding of past human occupation in coastal areas of Northwest Alaska. We now know more about the timing of specific cultural changes during the last 4000 years.

Future research will explore the reasons for some of the changes in settlement patterns noted here, particularly the link between environmental and social change.

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