

# Faunal Remains at the Chernofski Harbor Village Site (UNL-0034) with Attention to Seasonality and Temporal Consistency of Northern Fur Seal

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Chernofski Village is located within the traditional homeland of the Unangax of Unalaska. For thousan of years the Unangax have been, and continue to be the stewards of this land. It is with gratefulness and respect that we recognize the contributions, innovations, and contemporary perspectives of the Indigenous People of the Aleutian Islands.

### Introduction

During the 2019 field season, Cultural Resource
Consultants LLC (CRC) excavated five 1- by 2-meter (m)
units at Chernofski Harbor Village on western Unalaska
Island, located in the Aleutians of Southwest Alaska. All
units contained dense faunal remains and thousands of
animal bones were collected from the site. Units 1 and
4 were selected for faunal analysis because of the
differing ages of their deposits. Unit 1 deposits date to
the Amaknak phase, beginning at least by 2850 RCYBP,
towards the end of the first Neoglacial advance, if not
earlier, and continuing through at least 1670
RCYBP. The lower Unit 4 Late Aleutian Phase deposits
date to 880 RCYBP, and the upper deposits to the
Historic Period, all within the period of the third
Neoglacial advance (the "Little Ice Age").

# Location



# Materials and Methods

All large faunal remains and bone artifacts were recorded with a total station. Sediments from all units were dry screened using %" mesh and bulk faunal samples were taken from all 10 cm layers of the units. In the lab, 500 mL faunal samples were taken from the bulk samples of each stratigraphic level, identified using comparative collections, and quantified using Number of Identified Species (NISP). In addition, 10x10cm bulk column samples were taken

from Units 1 and 4 with 500 mL sub-samples taken to quantify the shellfish remains. These samples were processed through nested 4mm and 2mm screens, identified by invertebrate type, and quantified by weight.

Prehistoric







Historic

Procellariidae

Vulpes sp. Callorhinus ursinus

Cetacea Sea Mammal

Eumetopias jubatus

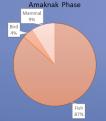
rinnipedia (medium) rinnipedia

Phocidae (sm/m)

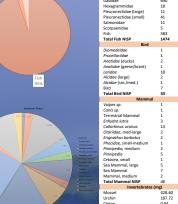
Mammal (medium)

Total Mammal NISF

natidae (ducks)







# Historic Faunal Distribution Fur Seal Sample

Bird			Level/Age										10	11	12	13	34	15	16	17	18	19	20	Total N
2N		F 91	fetal			1			1		2													
			0-4 menths		3		2	1	2	1		1	3	ı	1	3		1	1					
				Subtotal, pro-molt										pups										
			4-6 menths	П		$\neg$				г	П				1	1	1	$\neg$	2	2	4	1	2	
		L	mature	1	4	2		2		1	3	1	1	2	4			1					- 1	
														Subtotal, post-molt juveniles and adults										
	Contract to the contract of th		Total NISP																					
								72						1						73.7	0%		100	700
			Unit 4, Late Aleutian Phase									Л	Unit 4, Historic Period											
	000		Level/Age	8	1	)	10	11		12	13	1	otal N	SP	Ш	Level	/Age		3	4	5	6	7	Total
			fetal							1	1			2	ш	fetal		$\neg$			П			
			0-4 months	2		1	1	3				Г		7		0-4 n	nonths		15	13	2	6	7	
	A STATE OF THE PARTY OF THE PAR		Subtotal pro-molt nuns									1111	Subtotal, pre-molt pups											

# Chernofski C-14 Dates



Acknowledgements: Funding for the Chernofski Harbor Village excavation project was provided by the US Army Corps of Engineers, Alaska District. Faunal comparative collections and individual specimens were made available by the Alaska Consortium of Zooarchaeologists, the University of Alaska's Museum of the North, Cultural Resource Consultants LLC, and University of New Mexico. Data for this presentation are from the 2021 report by Cultural Resource Consultants LLC on the 2019 excavations. Zooarchaeologists Aubrey L. Morrison and Linda Finn Yarborough, and University of Alaska Anchorage graduate students Emily Corley and Elizabeth Ortiz, and undergraduate student Christine Castro worked on the identifications.

# Seasonality

Marine resources were very important to Chernofski residents throughout the three thousand years they inhabited the site. Chernofski Village is located just east of Umnak Pass, the narrow strait separating Unalaska and Umnak islands. This pass is relatively shallow and has an extremely high biodiversity compared to the deeper passes in the central Aleutian Islands which do not allow for the same degree of mixing in the water column as do the shallow passes in the eastern Islands. This mixing creates intense blooms of phytoplankton supporting increased diversity at higher trophic levels.

It is likely that the Chernofski Harbor Village was heavily utilized during the summer months with possible continued use throughout the winter. Between 8 95% of identified fauna are fish species that would have been present for all or most of the year. However, the most numerous identified fish species, Cod, would have been most readily available from late spring to early fall when they come into the shallow waters near shore for spawning (Mecklenberg et al. 2002). This does not preclude the use of Cod throughout the rest of the year as it would have been dried and stored for the winter.

Identified bird specimens made up the smallest portion of the faunal sample, ranging between 2-4%. Several identified bird species also indicate the summe occupation of UNL-0034. These species, which include murres, puffins, albatross, and kittiwakes, would all be present during the summer nesting season frou late spring until early fall (USFWS n.d. b, n.d. c, n.d. f), the same time period that many of the identified fish species would have been most prevalent.

Mammal specimens comprised 3-9% of the identified samples, the most interesting of which is the presence of fetal, neo-natal, and juvenile fur seal (Callorhinus ursinus) within the identified samples. Today, adult and year-old fur seals migrate in the spring from their wintering locations as far south as California to the Pribilof Islands in the Bering Sea. Adult males arrive at the Pribilof Island rookeries first in May; pregnant fur seals arrive in late spring to early summer in order to give birth in late June or early July. No rookeries are known in the eastern Aleutian Islands. Juvenile fur seals stay in the rookery for three to four months until weaning and molting are completed before migrating south in October.

## Callorhinus ursinus - Northern Fur Seal

The most numerous identified mammal bones from all three time periods represented in the Chernofski identified sample are those of fur seal (Callorhinus ursinus). As shown in the "Fur Seal Sample" table to the left, at least one was identified in each sample from every 10-centimeter (cm) level from both Units 1 and 4, with averages of 3.5 bones per 10 cm level in the Late Aleutian Phase sample, and 9 bones per 10 cm level in the Historic Period sample. Fur seals were one of the main species sought by Russian and American hunters and traders in the Aleutians from the eighteenth through the nineteenth centuries C.E., which may have a bearing on the numbers of bones from the Historic Period strata.

Fur seal bones have also been recovered in excavations at the Amaknak Bridge and Tanaxtaxak (Amaknak Spit) sites on Unalaska, and at the Ashishik site on the eastern side of Umnak Island, across Umnak Pass from Chernofski. At least the younger strata at the Amaknak Bridge site, dated c. 3500-2500 BP, are contemporaneous with the oldest strata in Unit 1 at Chernofski, with occupation continuing to at least 1670 RCYBP in Chernofski's younger Unit 1 strata. Ashishik's oldest strata date from about 1400-1100 BP, around the end of the Amaknak Phase, its middle occupation to about 500 BP, and its upper strata to the protohistoric period (Denniston 1974). Archaeological deposits at both Tanaxtaxak and the middle and upper levels of Ashishik are contemporaneous with the Late Aleutian Phase levels of Unit 4 at Chernofski.

When Susan Crockford identified the fur seal bones from Amaknak Bridge, she noted the ages-at-death. Based on the presence of newborn and young juveniles she postulated that the Bering Sea ice edge must have been so close to the Aleutian Islands during the first Neoglacial advance that the Pribilof Islands were unavailable as a birthing location, and seal births were occurring at a rookery close to the village site (Crockford 2007: 702, 704). She also suggested that, based on the ages of the fur seal bones from Tanaxtaxak, a local rookery was present during the Late Aleutian Phase.

The consistent presence of either fetal or young juvenile fur seals throughout the 10 cm level samples from Units 1 and 4 of the Chernofski Harbor Village excavations also suggests that at least one, if not more, fur seal rookeries continued to exist in the eastern Aleutian islands after the end of the first Neoglacial advance at about 2500 BP, and continued to be a locally available subsistence resource possibly as late as the late 1800s CE.



Photo courtesy of Alaska Department of Fish and Game

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