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WORK PLAN SEGMENT REPORT  
FEDERAL AID IN WILDLIFE RESTORATION

STATE: Alaska

PROJECT NO: W-6-R-5 TITLE: Alaska Wildlife Investigations

WORK PLAN: G-b TITLE: Marine Mammal Studies

JOB NOS.: 1, 2, 3

PERIOD COVERED: July 1, 1963 to December 31, 1963

ABSTRACT

Beluga Whales

Two whales - a 5 foot male and an 11 foot female - were collected by driving the animals into shallow water and harpooning them. Both animals were measured, the reproductive tracts collected and preserved and the stomachs examined for food habit information.

During a two hour flight over Cook Inlet in a Piper Supercub, 84 belugas were sighted, indicating that aerial surveys may be a feasible method of determining the abundance and distribution of belugas in Alaska.

Sea Lion

As part of a breeding biology and movement study, 799 Steller sea lion pups were tagged on Sugarloaf Island in the Gulf of Alaska. Marking was accomplished by driving the adults to the water, then attaching a cattle ear tag to the right front flipper of a pup which had been run down and captured by hand.

An aerial survey of southeastern Alaska made during July 1964, revealed the presence of 8,340 animals. The count is similar to those obtained during past years and indicates the population may be at its carrying capacity for the habitat.

Sea Otter

The reproductive tracts, stomachs and pelage specimens were taken from 20 sea otters collected on Amchitka Island during July 31 - August 3, 1963 and are now being analyzed.

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## RECOMMENDATIONS

No recommendations relating to management can be made at this time.

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OBJECTIVES

To determine the abundance and distribution of beluga whales; assess the present harvest by natives; and gather additional information on breeding biology, age and food habits.

To classify the rookeries and hauling grounds of Steller sea lions and investigate their breeding biology and food habits.

To determine the abundance and distribution of sea otter in selected areas of the State and to gather information on the breeding biology, molt, and food habits of the animal.

TECHNIQUES

During August, field activities were conducted in Bristol Bay primarily to learn the habits of beluga whales, and to become familiar with collecting methods. Capture of the whales is accomplished by driving the animals into shallow water with the aid of a small outboard and skiff, then harpooning them with a hand thrown harpoon. The animal is then dispatched with a rifle bullet placed about a foot posterior to the blowhole.

On July 18, a reconnaissance flight was made over Cook Inlet to check the feasibility of measuring beluga abundance and distribution by aerial surveys. The flight was carried out in a Piper "150" Supercub Model PA-18 equipped with floats and flown at an airspeed of approximately 75 mph. Flight altitude was maintained at 400 feet above the water which was calm.

To aid in the investigation of the breeding biology and movements of sea lions, 799 pups were tagged on Sugarloaf Island in the Gulf of Alaska. Marking was accomplished by using cattle ear tags (Style 19 M of National Band and Tag Company, Newport, Kentucky) made of monel metal with dimensions before folding 0.036 x 3/8 x 6 1/2 inches. Tags were applied to the rear margins of the right fore flippers where furred skin ends and bare skin begins.

Aerial surveys were made in July to locate rookeries and gauge the abundance of sea lions in southeast Alaska.

Reproductive tracts, stomachs, and pelage specimens were obtained from 20 sea otters collected on Amchitka Island during July and August. By cooperative agreement these materials are being analyzed by a biologist of the U. S. Fish and Wildlife Service.

#### FINDINGS

This, the initial year of beluga whale, Steller sea lion and sea otter investigations, was in large measure devoted to familiarization with the animals and areas of work, and to the development of techniques and procedures of study. A significant portion of the study period was devoted to reviewing and compiling pertinent literature. The studies were collateral to management phases of marine mammals investigations during which three hundred sea otter pelts were fleshed and otherwise prepared for test marketing.

#### Beluga Whales

##### Breeding Biology and Food Habits

Although field work in Bristol Bay during the period August 15 - 25, was hampered by inclement weather, two belugas - a 5 foot male and an 11 foot female - were captured and processed. The stomach of the male was empty and that of the female contained one shrimp. Standard length, girth and flipper measurements were taken (1961 Jour. Mamm. 42 (4) 471-476) and the reproductive tracts examined.

During a two hour flight over Cook Inlet on July 18, eighty-three belugas were observed. Of the total, 16 were seen in the estuary of the Beluga River and 54 were observed in the estuary.

of the Susitna. It was noted that the whales could be seen from a considerable distance and could be counted with little difficulty. On the basis of this one survey it appears that aerial observation is a feasible method of estimating beluga abundance and distribution. Relatively calm conditions are essential, however, to obtain counts and to provide some measure of safety in the event of aircraft failure.

## Sea Lion

### Breeding Biology

During the periods June 18 - 21, and July 9 - 10, 1979 Steller sea lion pups were tagged on Sugarloaf Island located in the Gulf of Alaska. The rookery is one of the largest in Alaska with an estimated population between 14,000 and 15,000 adults and 9,000 to 10,000 pups.

The tagging operation was facile and did not require any special facilities or equipment. The adults and pups were first separated by driving the adult animals into the water. The pups were then run down, captured by hand, and held to the ground while a cattle ear tag was attached to the right front flipper. On occasion a bull or cow refused to move and had to be by-passed in order to get to the pups.

Although the tagging operation frequently resulted in the trampling and knocking around of pups when the adults scrambled for the water, induced pup mortality appeared to be low. An accurate dead pup count was not taken but it was estimated that the mortality did not exceed 100 animals in an area where more than 6,000 live pups occurred.

During the tagging operation the sex of pups was noted and a random sample of 895 animals revealed a sex ratio of 52.4 per cent males.

Recapture of some of the tagged animals in future years should provide invaluable data on their breeding biology as well as information on growth rates, mortality, and seasonal movements.

A tagging program is again planned for June 1964.

### Abundance and Distribution

An aerial survey of southeastern Alaska from Dixon Entrance to Cross Sound was made during July and 8,340 animals were

counted. Table 1 gives the location and number of adult sea lions sighted.

Table 1. Numbers and location of adult Steller sea lions counted during an aerial survey of southeast Alaska during July 19 - 20, 1963.

Cape Cross	300	First Kekur	100
White Sisters	800	Hazy Islands	1,500
Sea Lions Island	12	Timbered Island	100
Jacobs Rock	8	Cape Addington	15
<u>North Rock</u>	<u>4</u>	<u>Forrester Island</u>	<u>5,500</u>
Total Number of Sea Lions		8,339	

The results of the survey are similar to those conducted in former years and suggest the population may be at its carrying capacity for the habitat.

#### Sea Otter

The investigation of the food habits, molt, and breeding biology of sea otters was first initiated in 1962, under Project No. W-6-R-3. Although the major objective of this project was the development of harvest and handling techniques for purposes of determining potential commercial values, stomachs, reproductive tracts and pelage specimens were also collected and preserved for future analysis. Three previous collections during which 477 animals were taken had been carried out between the months of October and April in an attempt to determine when the pelts were at their peak of primeness. Since no summer collections had been made it was deemed advisable to fill this gap in our information of the food habits, reproduction and molt of the animal.

#### Collections

A field trip was made to Amchitka Island during the period July 30 - August 8, and twenty animals were collected. Table 2 presents in tabular form the sex, age classes, weights, measurements and areas of collection. All reproductive tracts, stomach and pelage specimens were preserved for analysis. As a result of a cooperative agreement between the U. S. Fish and Wildlife Service and the State of Alaska, the Bureau of Sport Fisheries and Wildlife has the responsibility of analyzing all digestive and reproductive tracts of animals collected adjacent

Table 2. The sex, age, weights, and measurements of sea otter collected on Amchitka Island in July and August 1963.

Date	Seal No.	Sex	Age	Weight in lbs.	Body Length in cms.	Pelt Length in cms.	Location of Collection
7/31/63	505	F	Ad	43	125	163	St. Markarius Pt.
8/ 1/63	506	F	Ad	43	120	170	Rifle Range
"	507	F	Ad	44	120	175	"
"	508	F	Ad	44	112	173	"
"	509	F	Ad	51	--	168	"
"	510	F	Ad	45	117	178	"
8/ 2/63	511	F	Ad	56	124	180	Kirilof Bay
"	512	F	Ad	35	112	163	"
"	513	F	Ad	64	122	183	"
"	514	F	Ad	45	122	178	"
"	515	F	Ad	51	122	180	"
"	516	M	Ad	55	130	185	"
"	517	F	Ad	52	120	175	"
"	518	F	Ad	48	122	173	"
"	519	F	Ad	49	124	183	"
"	520	F	Ad	53	122	178	"
8/ 3/63	521	F	Ad	46	124	170	Constantine Pt.
"	522	F	Ad	46	109	168	"
"	523	F	Ad	47	122	178	"
"	524	F	Ad	43	120	170	"

to the Aleutian Islands National Wildlife Refuge. Mr. Karl Kenyon of the Bureau of Sport Fisheries and Wildlife is now processing the data.

SUBMITTED BY:

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Game Biologist