

Quarterly Report

Contract #03-5-022-53

Research Unit #230

Reporting Period: 1 July-30 September 1978

Number of Pages:

The Natural History and Ecology of the Bearded Seal
(Erignathus barbatus) and the Ringed Seal (Phoca hispida)

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30 September 1978

I. Task Objectives

1. Summarization and evaluation of existing literature and available unpublished data on reproduction, distribution, abundance, food habits and human dependence on bearded and ringed seals in the Bering, Chukchi and Beaufort Seas.
2. Acquisition of large amounts of specimen material required for an understanding of productivity, growth rates and mortality in these two species.
3. Acquisition of baseline data on mortality (including parasitology, diseases, predation and human harvest) of ringed and bearded seals.
4. Determination of population structure of bearded and ringed seals as indicated by composition of harvest taken by Eskimo subsistence hunters.
5. Initial assessment of regional differences in density and distribution of ringed and bearded seals in relation to geographic areas and, to a lesser extent, in relation to major habitat condition.
6. Acquisition of additional information on seasonal migrations.

II. Field and Laboratory Activities

Effort this quarter was devoted primarily to laboratory processing of specimen material collected during the spring field season. Male reproductive tracts were analyzed. Claws and teeth were processed to determine seal ages.

Field work consisted of a village collection at Wainwright in which specimens from 6 bearded seals and 33 ringed seals were obtained. Project personnel participated in a Beaufort Sea icebreaker cruise aboard the USCGC NORTHWIND during which three ringed seals were collected. In addition, a person was sent to Point Lay in early August to investigate a report of a large number of belukhas in the nearby lagoon.

Data management occupied a substantial amount of time. Newly processed specimen data were coded, keypunched and prepared for submission to NODC. In mid-September we obtained a data microprocessor and began work on software for data entry and analysis.

Table 1 provides a complete listing of field and laboratory activities during the past quarter. Dates and personnel are included.

Table 1. Field and laboratory activities, 1 July-30 September 1978.

Activity	Dates	Personnel
Specimen collections:		
Wainwright	1-12 August	D. Strickland
Beaufort Sea-NORTHWIND	15-22 August	K. Frost
Point Lay belukha observation	1-5 August	G. Seaman
Planning meeting for Beaufort Sea winter studies	31 July-1 August	K. Frost, J. Burns
Laboratory processing of specimen material	continuous	J. Burns, P. Field, R. Lynn, D. Strickland, R. Tremaine, G. Seaman
Data management	intermittent	K. Frost
Data microprocessor hookup, data analysis		L. Lowry, L. Miller

Methods

For a discussion of methods, refer to RU #230 Annual Report, 1 April 1978.

Data Collected

Table 2 summarizes the results of collection efforts during this quarter, as well as those of spring quarter collections not previously reported.

Table 2. Seal specimens obtained during the period 1 July-30 September 1978.

Location	<u>Phoca (Pusa) hispida</u>	<u>Erignathus barbatus</u>
Gambell	9	48
Savoonga	33	44
Diomede	25	10
Wales	34	29
Elephant Point	3	-
Wainwright	33	6
NORTHWIND	3	-

III. and IV. Results and Preliminary Interpretation

A detailed presentation and discussion of results was provided in our 1978 Annual Report. Further results and discussion of data will be presented upon completion of additional laboratory work and data analysis.

V. Problems Encountered/Recommended Changes

None.

VI. Estimate of Funds Expended

As of 31 August we have expended the following amounts during FY 78:

Salaries and benefits	\$ 78,200
Travel and per diem	13,900
Contractual services	9,000
Commodities	3,600
Equipment	<u>9,100</u>
Total Expenditures	\$113,800