

**Alaska Department of Fish and Game
State Wildlife Grant
ANNUAL INTERIM PERFORMANCE REPORT**

Grant Number: T-1 **Segment Number:** 16
Project Number: 3
Project Title: Bowhead Whale Diet Investigation: St. Lawrence Island, Bering Sea
Project Duration: 20 May 2005 – 30 June 2008
Report Period: 20 May 2005 – 20 May 2006
Report Due Date: August 20, 2006

Objectives (a) Collect stomach contents, harvest data, and other biological tissues from bowhead whales harvested on St. Lawrence Island in 2005, 2006, and 2007 in cooperation with the Gambell Whale Captains Association, Savoonga Boat Captains Association, North Slope Borough Department of Wildlife Management (NSB-DWM), Alaska Eskimo Whaling Commission (AEWC), and Alaska Department of Fish and Game.

(b) Analyze the stomach contents of bowhead whales collected during this study and from previous collections to determine the composition of the bowhead diet in the Bering Sea by season, sex, and whale size class.

Summary of Accomplishments

Gay Sheffield traveled to St. Lawrence Island during the fall 2005 whaling season (Nov. 30 – Dec 4) to collect harvest data, stomach contents, and other biological tissues. Three adult bowheads were harvested and sampled (Table 1). These three whales are the first bowhead whales from the northern Bering Sea sampled during late fall. All whales had prey in the stomach and/or intestine and were classified as “feeding”. In the laboratory, samples were thawed, rinsed, and sorted macroscopically into major taxonomic groups, examined microscopically, and identified to the lowest taxonomic level at the University of Alaska Institute of Marine Science. Euphausiids and copepods occurred in all whales sampled (Table 2). Three randomly selected subsamples (1 cubic inch) were taken from each animal and the numbers of prey contained in the subsample were approximated. Biological samples other than stomach contents were provided to the NSB-DWM for ongoing studies and/or archived at the University of Alaska Museum for future studies (Table 3).

Gay Sheffield also traveled to St. Lawrence Island during the spring 2006 whaling season (April 19 – May 8), but the spring season was unsuccessful primarily due to poor weather conditions. No additional harvest data or samples could be collected.

Additional bowhead whale samples are needed in order to address diet comparisons by season, sex, and whale size class.

Significant Deviations

1. Intestinal samples were collected when stomachs were not available for sampling.
2. The additional subsampling of one cubic inch from each frozen prey sample allowed for standardized count estimates of prey.

Table 1. Summary information for bowhead whales harvested near Savoonga during the fall 2005 whaling season. Pregnant animals indicated by *.

ID Number	Date	Sex	Total length
05S5 *	29-Nov-2005	Female	16.46 m
05S6 *	29-Nov-2005	Female	17.07 m
05S7 *	29-Nov-2005	Female	18.29 m

Table 2. Prey items from bowhead whales harvested near Savoonga during fall 2005.

Prey Items	05S5	05S6	05S7
Euphausiids			
<i>Thysanoessa raschii</i>	X	-	X
Unidentified euphausiids	-	X	-
Copepods			
<i>Calanus marshallae</i>	X	X	X
Shrimp			
Unidentified Hippolytidae	X	-	X
Fish			
Unidentified vertebra	-	-	X

Table 3. Tissues collected from bowhead whales harvested near Savoonga during fall 2005 and the recipient of those tissues.

	05S5	05S6	05S7
Stomach contents	ADF&G	ADF&G	-
Intestine	NSB-DWM	-	NSB-DWM
Eyeball	NSB-DWM	-	NSB-DWM
Ovaries	-	NSB-DWM	-
Skin	NSB-DWM; UAM	NSB-DWM; UAM	NSB-DWM; UAM
Fetal skin	NSB-DWM	NSB-DWM	NSB-DWM
Baleen	NSB-DWM	NSB-DWM	-

ADF&G = Alaska Department of Fish and Game (Fairbanks)

NSB-DWM = North Slope Borough, Department of Wildlife Management (Barrow)

UAM = University of Alaska Museum (Fairbanks)

Actual Costs during this Report Period (*personnel plus all operating expense totals*):

Federal (from ADF&G):	Partner (nonfederal share):	Total:
\$7,059	\$ 2,353	\$ 9,412

Project Leader (*or Report Contact Person*): John “Craig” George (NSB-DWM) / Gay Sheffield (ADF&G)

Additional Information:

Presentations of fieldwork and research results were made to the Cities of Gambell and Savoonga, Gambell and Savoonga IRA Tribal Councils, Sivuqaq Native Corporation, and the Gambell and Savoonga Whale Captains Associations. Reports of work accomplished were provided to the St. Lawrence Island AEWG Commissioners, Gambell Boat Captains Association, and the Savoonga Whaling Captains Association.