

Native Harvest and Use of Beluga  
in the Upper Cook Inlet  
from January through June 1995

Presented To:  
The National Marine Fisheries Service  
Protected Resources Management Division

by  
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## Abstract

Native beluga whale hunters of the upper Cook Inlet reported results of their beluga hunts during April, May, and June of 1995. Twenty two beluga were taken, eight were sunk, and five were reported wounded. Therefore, a total of 30 whales were reported killed. Larger beluga were whiter and shorter ones were grayer, with some overlap between white and grayish-white around 12 feet of length. Nearly equal numbers of males and females were reported taken. Native beluga hunting technique, whale use, and knowledge regarding beluga are briefly discussed. Particular attention is given to techniques which should increase hunt efficiency and minimize waste.

## Methods

The following statistics on Native taken beluga were observed, recorded, and/or reported by hunters and other researchers, during and after each hunt. Interview/ self report data recording sheets were developed and deployed (Appendix A). Data and supplementary information were compiled in PARADOX 4.5 for Windows data base management program. At least one member of each crew (except one), which was thought to have possibly taken a whale, was contacted regarding each hunt. None are thought to have withheld information requested for this survey. It is possible, given the level of communication maintained within the upper Cook Inlet beluga hunting community, and with added systematic and consistent survey effort, that 100% of the whales taken in the upper Inlet during the report period are documented here. The captain, crew, and hunt date are recorded for each hunt in the data set. This information, and other details of each hunt, were compared during data collection and entry, to avoid double counting of taken animals, which would occur if interviews were summed as independent data.

## Results and Discussion

Twenty two beluga were taken (killed and retrieved) during the report period. Eight more were sunk (killed but sunk before being retrieved). Five were reported wounded and lost. These data are broken down by month in Figure 1. The two categories; sunk, and wounded and lost, would be combined to yield 13 in the conventional NOAA struck and lost category. Alternatively, these take and sunk statistics can be added to yield 30 animals which almost certainly died in these hunts.

Taken beluga were classified as follows: There were nine males, eight females, and five of unknown sex reported. Sixteen were white, five grayish-white, and one gray. These lengths and colors are shown in Figure 2. Some lengths derive from actual measurements, while others are estimates. Therefore, all lengths are rounded to the nearest foot. Not all of these characteristics were reported for all whales. The white whale shown as 12 feet was a female and only 11' 7" in length. Longer whales are reported to have been taken in previous seasons.

Approximately 25 hunters participated in hunts in the Cook Inlet (Inlet) in which a whale was taken during this report period. There is some agreement that fewer hunters have taken whales this year than during comparable seasons of recent years. Much of this is due to nonparticipation in the hunt this year. Also, 16 hunters staged at least one known unsuccessful hunt. Most, if not all the hunters, who we know took whales in the Inlet during the report period reside in the Anchorage, Palmer, Wasilla area. A couple of crews from 'up North' hunted beluga in

the upper Cook Inlet, but were unsuccessful. Most hunts were staged from the Ship Creek dock in Anchorage, although one crew departed from the Knik River access. The earliest whales of the year can be taken in Kachemak Bay, where the ice breaks up sooner than in the upper Inlet. Only one was taken there, the first of this report period. The rest of the whales were taken in the Inlet between the mouths of the Little Susitna and Beluga Rivers. Most beluga were taken near the mouth of the Big Susitna River. A few were taken at Beluga or Ivan Rivers.

The boat owner was generally also the captain, and often the driver. In some crews, drivers alternated as rifleman and/or harpooner. This related to situational variables, experience, ability, and personal preference. In one crew, the captain generally operated as rifleman/harpooner while an elder crew member drove. In an unusual two person crew, the captain shoots and harpoons. His driver is a woman. Two riflemen is common, but more is considered congestion. Riflemen generally shoot from the bow of the boat. One owner-built wooden boat has a wooden cabin atop which riflemen can sit. This provides a more effective shot and viewing angle.

When a target animal is selected, it is followed closely till it can be shot as it breaches for air. The driver attempts to herd it to remain in shallow water. To follow the whale he watches for the "covenough" or wake which the whale leaves in shallow water. The rifleman has only (roughly) a couple seconds to shoot as the whale may expose only its head to breath when being chased. Whales were generally shot in shallow water with high caliber, jacketed bullets, harpooned then gaffed when nearing death. Most observed harpoons are of the toggle type. The whale is towed by a bow line tied through the lower mandible and around the mandibular symphysis (the front of the lower jaw) or around the fluke stock.

Perhaps a third of dispatched whales were lost when they sank. Initial shots should hit near the blow hole so that the whale will not sink before a harpoon float can be attached. Later shots can be directed to the brain behind the blowhole to dispatch the animal. One hunter had some success finding sunk whales using exploratory snagging casts with a treble hook. Depth or fish finders could also be used to locate sunk whales in the turbid, but shallow water, where they could be retrieved.

The low wounded and lost statistics reported here are probably too good to be strictly accurate. Hunters tend to forget some of these unfortunate events. More were recorded during hunts than with hunter recollection subsequent to hunts. It may sometimes be considered inappropriate to request this data, especially from hunters not familiar with the project and researchers. Those hunter/researchers who conscientiously tallied sunk and wounded statistics from their hunts took extraordinary efforts to minimize them. One harpooned a beluga, using an ivory toggle harpoon, in the shallows before shooting it to assure successful retrieval.

Hunts generally occur during higher tide phases when the shallows are navigable. Whales are towed and deposited near land or a sand bar. As the tide recedes, the whale is beached for butchering. Skill and experience are required to discern, memorize, and navigate channels between shallows and sand bars. Inexperienced boaters are more often stranded in shallows and on sand bars, especially when attempting to access the camp.

Muktuk is the most prized proceed from a beluga whale. This is the skin with about an inch of blubber. It is slowly boiled for tenderness eaten raw frozen, etc. Flippers and flukes are also eaten, and favored by elders. The meat, termed black meat, was sometimes taken when time and circumstances allowed. This was often dried, and is considered desirable by many Natives. Blubber was sometimes conserved in buckets for oil. The oil will settle out with time, but the muktuk must be turned frequently to avoid petrification. The vertebrae, which are carved for

masks, are more likely to be stashed during fall hunts to weather clean over the winter. Two experienced hunters, with help to hold bags, etc., can butcher a 15 foot beluga, saving all the aforementioned products, in three hours.

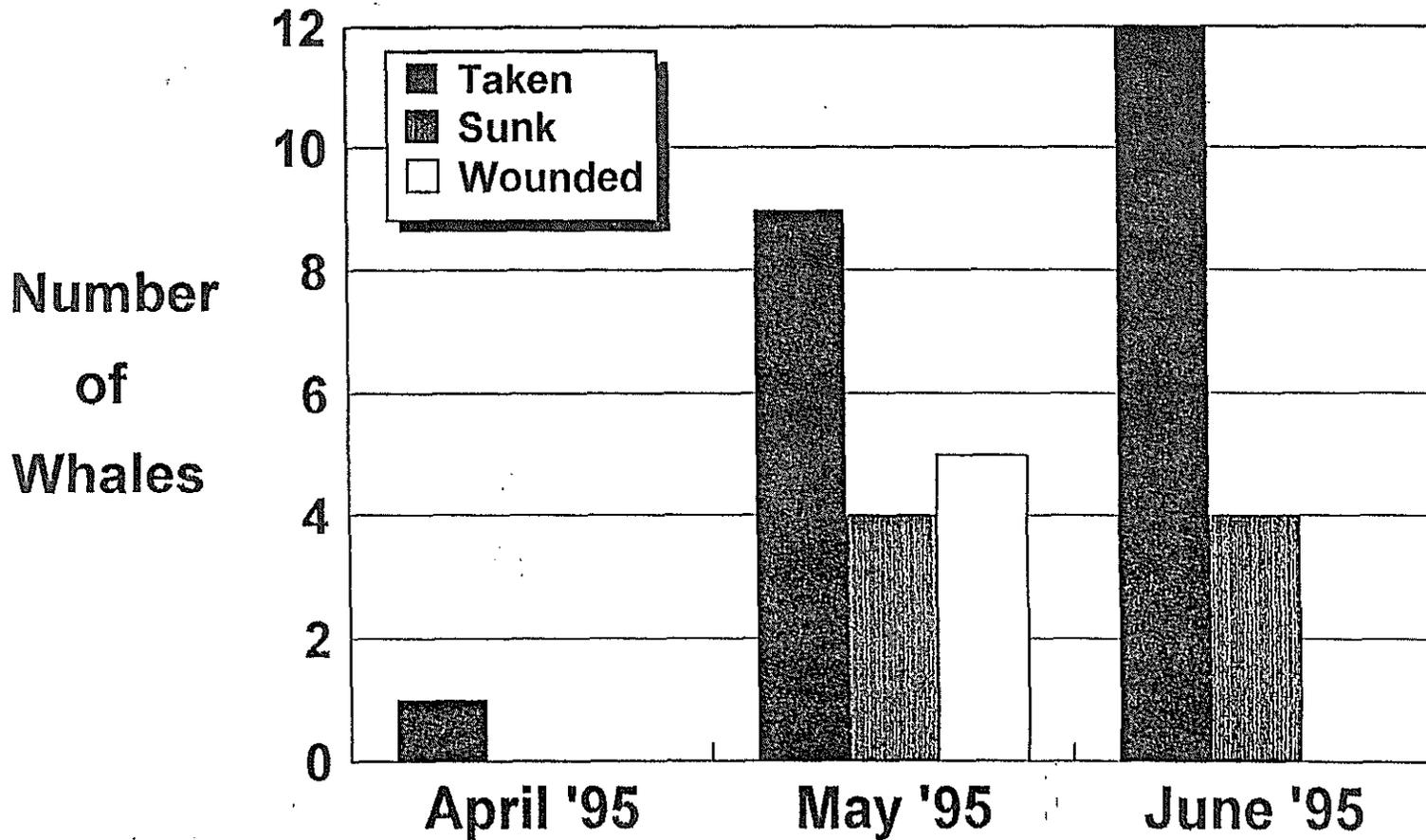
The first beluga taken this year was shared with the Anchorage area Native community at a potluck/potlatch; the First Annual Beluga Giveaway. After most hunts, each crew member received a share of the muktuk and meat, with a share for the boat. Further distribution proceeded according to the hunters' distribution networks.

Five hunters independently reported having found king salmon up to 40 pounds in beluga stomachs. Four 30-40 pound salmon and five rocks around 5 inches in diameter were found in a beluga stomach several years ago. Smaller whales would probably have difficulty swallowing large king salmon. Some beluga taken during this study were full of the small but numerous fish, hooligan. Beluga are reported to eat trout in Kachemak Bay in the Spring.

Beluga grouping patterns seem to be related to patterns of fish dispersion in time and space. Beluga arrive in the upper Inlet in 'pods' and remain grouped during the king salmon and hooligan runs. These pods disperse between the king and red salmon runs to hunt (presumably) more dispersed fish resources. The largest aggregate or 'herd', estimated at around 1,000 animals, has been seen to span the Susitna mouth shallows during the red and silver, and pink salmon runs later in July. These later salmon runs, which overlap, can provide a more abundant, and spatially condensed food resource than the king salmon runs, in which individuals are more dispersed. This allows the large herd to coalesce and feed. The red salmon runs may best coincide with the largest beluga aggregations. The 'herd' may retain pod or other subgroup structure. The herd breaks up, becoming scarce and dispersed before the Inlet ice-up. This may coincide with decreases in late season fish runs. Most beluga probably migrate down the Inlet after the anadromous fish runs. This theory requires further research for verification.

Experienced hunters, some of whom have consistently hunted and observed beluga in the upper Inlet since the late 1950s, agree that beluga numbers and reproductive rates there currently are as high, or higher than in previous years. In other words, in comparison to previous years, beluga are currently relatively numerous and the proportion of grey (young) whales is quite high. Hunters report that they and others have taken numbers comparable to those reported here over the past three decades. Rigorous, comprehensive data for all hunters were not compiled for any year. However, at least two log books exist recording takes of productive crews for at least two previous years. Several hunters have reported that the frequency of lesions, tumors, and other irregularities, particularly the skin and blubber, have increased in recent years. Future research should systematically address Native reports of these demographic and related parameters. Native hunter reports probably contain the best longitudinal data available for much of this information.

**Figure 1**  
**Number of Whales Taken, Sunk, or Wounded**  
**by Month**



**Figure 2**  
**Number of Taken Whales**  
**by Length and Color**

