

Marine Mammals of Kasegaluk Lagoon

by Kathy Frost

Note: Kasegaluk Lagoon is located on Alaska's northwestern coast, between Cape Lisburne and Wainwright.

Spotted Seals: World Travelers

Seals, seals, and more seals! That is what there are in Kasegaluk Lagoon along the northwestern Chukchi Sea coast of Alaska. This sparsely populated and little-traveled area of Alaska has some of the largest spotted seal haulouts in the world. Over 2,000 spotted seals haulout to rest on sandbars and spits near passes at the northern and eastern end of the lagoon. In Inupiat, Kasegaluk means "the place of spotted seals."

Spotted seals are the ice-breeding cousins of the more familiar harbor seals. To the casual (and even the experienced!) observer, the two species look very much alike. In fact until only 10 years ago they were considered to be the same species. Unlike harbor seals that reside year round in the coastal zone and have their pups on land in May or June, spotted seals winter in the Bering Sea ice front and have their pups and molt on the sea ice in April and May. As the ice melts and recedes north, spotted seals move north and towards the coast and spend the summer acting more like harbor seals. They haulout on spits and sandbars from Kuskokwim Bay to the Beaufort Sea in Alaska and also along the coast of Siberia.

There are four major known haulout areas in Alaska where 1,000 or more spotted seals have been counted. Only one of

these, Kasegaluk Lagoon in the northern Chukchi Sea, has been studied. In 1989-1991, Alaska Department of Fish and Game (ADF&G) biologists Kathy Frost, Lloyd Lowry, and Geoff Carroll conducted aerial surveys and satellite tagging studies of spotted seals in Kasegaluk Lagoon from July to September to determine the number of seals present, when they arrive, how long they stay, and what areas they most commonly use. They found that even though there are many passes through the barrier islands into Kasegaluk Lagoon, only two (Utukok and Akoliakatat) are used by the seals for hauling out. On some survey days, over 1,000 seals crowded together on the small sand spits near these passes. The seals also use several haulouts in a large inlet (Avak Inlet) near Akoliakatat Pass. It is still unknown what makes these few places so suitable for seals while the others are unused.

During August 1991, in order to learn more about length of time hauled out and where seals go when they leave the spits and sandbars, ADF&G coordinated a project to attach satellite tags to four spotted seals in Kasegaluk Lagoon. Cooperators included the North Slope Borough, Texas A&M University, the National Marine Mammal Laboratory, and the people of Point Lay.

Biologists, Point Lay elders, and several family members (the field crew ranged from age 4 to 77) traveled in three small boats from Point Lay to Utukok Pass 25 miles up the coast. Seals were caught by setting nets (similar to floating gillnets used for salmon, but with larger mesh and heavier twine) near the pass

where seals might swim by. Despite 35 mph winds mixed with snow and rain, four seals were caught in four days. The seals weighed 100-230 pounds and included three males and one large female. Each seal was untangled from the net and taken by boat to the beach. Since seals don't have necks suitable for collars, satellite transmitters were glued to the back with 5-minute epoxy. The 2-pound packages should stay on until the seals shed their hair (molt) next spring.

In just two months, information from the satellite-tagged seals has changed biologists' thinking about spotted seals. Much to the surprise of everyone, Kasegaluk Lagoon spotted seals spend more time traveling and less time resting than ever imagined! Within the first two months, one young male traveled over 1,300 miles and made two round trips between the Siberian coast and Kasegaluk Lagoon! Another visited Kivalina and then swam back to Cape Lisburne, a distance of over 350 miles, in just two weeks. The other two have moved between northern Kasegaluk Lagoon and Point Hope. These long trips to sea are undoubtedly associated with feeding. The seals sometimes make over 250 dives in a day, with an average length of 4-8 minutes.

Based on information from these four satellite tags, the first ever attached to spotted seals, we now know that Kasegaluk spotted seals spend most of their time at sea and may travel long distances from their regular haulouts. The 2,000 seals that biologists count in Kasegaluk haulouts during aerial surveys



(left to right) Warren Neakok, Dorcas Neakok, Samantha Carroll, Quinn Carroll, Randy Davis & Geoff Carroll tag a spotted seal.

must represent only a small fraction of the total seals using the area. We hope that satellite tagging studies planned for 1992 will teach us even more about the diving characteristics and habitat use of spotted seals in northern Alaska.

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Beluga Update

What whale is white, 14 feet long, and concentrates in shallow coastal waters during summer? Most Alaskans immediately know the answer is the beluga whale, but they may be familiar only with the Cook Inlet population of this small odontocete (toothed) cetacean. In fact, most belugas in Alaska belong to the Bering Sea population. Belugas in this population winter in the Bering Sea and travel to different concentration areas in northern Alaska, Canada, and Siberia to spend their summers.

There are four major concentration areas for belugas in northern Alaska: Bristol Bay, Norton Sound, Kotzebue Sound, and Kasegaluk Lagoon. Kathy Frost and Lloyd Lowry of the Alaska Department of Fish and Game (ADF&G) have been studying one of these beluga concentration areas, Kasegaluk Lagoon, since about 1980. Most recently, they flew aerial surveys during July 1990 and 1991 to determine how many belugas use the area, when the belugas are present, and which areas seem to be used most often.

Kasegaluk Lagoon, which is about 100 miles long and less than 4 miles wide, is located along the northern Alaska coast between Cape Lisburne to the south and Wainwright to the north.

There are numerous passes into the lagoon which allow cold ocean water to enter or warm lagoon water to flow out. Beluga whales travel to Kasegaluk Lagoon in late June or early July, arriving first at the southern end and gradually moving farther to the north. They often concentrate in the shallow, muddy waters near the passes and may mill around in the same area for hours or sometimes for days.

The reasons why belugas concentrate near Kasegaluk Lagoon are not known for sure, but probably include molting, feeding, and calving. Recent studies by Canadian researchers have shown that belugas shed their skin, or molt, each summer. The warm, fresh water found near estuaries and lagoons is thought to accelerate the molt. When belugas molt, they like to rub against coarse gravel bottoms, scraping off old yellow skin which is then replaced by new white skin beneath. The passes in Kasegaluk Lagoon where belugas concentrate have all of the necessary ingredients for molting: extensive gravel beds nearby and warm, low-salinity water.

Belugas are difficult to count since they spend so much of their time under water. Also, they are often found in muddy water where they can't be seen below the surface. Aerial surveys are usually flown at altitudes of 1,000 feet or more in order to avoid disturbing the whales and to make it easier to take photographs

for counting. During surveys in 1990 and 1991, the highest number of belugas counted near Kasegaluk Lagoon was about 1,200. This probably represents 2,000-3,000 total belugas since many whales are under water and young, gray belugas are hard to see from such a high altitude. ADF&G biologists have attached radio tags to belugas in Bristol Bay and Canada to study the amount of time spent diving. They found that it was necessary to multiply aerial survey counts by two or three times in order to accurately estimate the number of belugas present in an area.

The village of Point Lay, with about 130 people, is the only village located along Kasegaluk Lagoon. Belugas are one of the most important subsistence resources for the residents of Point Lay. In some years, beluga *maktak* (skin and blubber) and meat make up 50 percent of the annual harvest of wild foods.

Because belugas are such an important resource, and because they are shared by people in other parts of Alaska as well as Canada and Siberia, a group called the Alaska and Inuvialuit Beluga Whale Committee (AIBWC) was formed in 1988. Members of this group include beluga hunters from Alaska and western Canada and representatives of local, state, and federal governments who are interested in the conservation and management of belugas. One of the most important goals of the AIBWC is to create a management plan for belugas that will identify



Beluga whale

conservation issues and provide harvest guidelines in order to ensure that belugas remain healthy and abundant for our children and grandchildren to enjoy and use. The management plan is a cooperative effort between biologists and hunters. A draft is being circulated in the villages for adoption in 1992. Alaskans recognize it is important to work together to keep belugas along our coastline healthy and abundant.

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