## Beluga Whales

by Kathryn J. Frost



B eluga whales are small, social toothed whales that live in oceans that are covered by ice for part of the year. They occur off North America, Asia, Europe, Svalbard, and Greenland. Belugas reach a maximum length of about 16 feet, and a more usual size of adult animals is 12-14 feet. Their closest relatives are narwhals, which also live in cold northern waters. As adults, belugas appear white or yellowish, which accounts for their name in several languages: *Delphinapterus*  *leucas*, their Latin scientific name in which *leucas* means white; belukha, from the Russian *belii*, meaning white; and white whale in English.

In the North Pacific, belugas are found off Alaska, western arctic Canada, and eastern Siberia. The relationship among the belugas in these different regions is not known with certainty, but those that winter in the Bering Sea are thought to belong to the same population. This is often called the Bering Sea population because these belugas winter and breed in the drifting ice of the Bering Sea. Most belugas spend the summer in coastal waters, often concentrating in large numbers in bays, estuaries, and at the mouths of rivers. While belugas are in these concentration areas they may feed, have their calves, and molt.

In Alaska, there are five summer concentration areas: Cook Inlet, Bristol Bay, Norton Sound, Kotzebue Sound, and Point Lay. The Cook Inlet whales belong to a separate population. Belugas in the other concentration areas all belong to the Bering Sea population. There is also a concentration of belugas that summers in northwestern arctic Canada off the Mackenzie estuary. This group is considered part of the Bering Sea population. It is estimated that there are at least 13,500-18,000, and possibly as many as 25,000 belugas (if those that summer in Siberian waters are included) in this population.

Belugas are an important subsistence resource to coastal Native residents of Alaska and Canada. Native hunters in Alaska harvest an average of about 350 belugas each year. The harvest in the Mackenzie estuary of Canada averages about 150 per year. While this total harvest makes up a very small percentage of the total beluga population (less than 4 percent), it may make up a significant portion of the diet of coastal residents. In the Alaskan village of Point Lay, for example, belugas account for over 50 percent of the diet of wild foods in some years. The annual beluga hunt is an important community event in many villages.

Because belugas that belong to the same population are harvested in both Canada and Alaska, and by many different villages that are located far apart, it is important for biologists and beluga hunters from both countries and the many villages to communicate and cooperate to ensure that the total harvest of belugas stays within safe limits. Prior to 1988, there was no formal organized way for these groups to get together. Then, in March 1988, a group called the Alaska and Inuvialuit Beluga Whale Committee was formed. This group is made up of researchers, government biologists, and beluga hunters from Alaska and Canada. The purpose of the committee is to promote the wise conservation, management, and utilization of beluga whales by developing a beluga management plan; identifying and encouraging protection of important beluga habitat; promoting beluga research; compiling harvest information and promoting hunter education to improve hunting techniques; and providing information to educate and promote understanding about beluga whale issues.





Above: Marine mammal biologists attach a transmitter to a beluga whale, which swims away (below).

September-October 1990

This beluga was found stranded. It is estimated that 13,500—18,000 belugas summer in the coastal waters of Alaska and northwestern Canada.



Since their first meeting in March 1988, members of the Beluga Committee have met twice annually. During these meetings they have compiled the most complete harvest data ever available for belugas in Alaska and have exchanged harvest information with the Canadians. The Committee is currently working to develop a system of village monitors in Alaska to further improve harvest reporting. In September 1989, the first draft of an Alaska Beluga Whale Management Plan was prepared and presented to the Beluga Whale Committee for discussion. Members of the committee believe a management plan is important because of increasing industrial development in beluga whale habitat, international concern about small whales and whaling, and because of the need to ensure a safe harvest level for stocks that are shared by different villages in Canada and Alaska. The Alaskans are discussing the management planning process with the Canadians in order to benefit from their experiences in developing the Canadian beluga management plan.

The next step will be for hunters in Alaska beluga-hunting villages and others interested in and concerned about belugas to review and make improvements to the draft plan. Since there are several different management stocks that make up the Bering Sea population (roughly corresponding to summer concentration areas), the overall plan is quite general and applies to all of the stocks. In the future, more specialized plans will be developed for each separate stock in order to address local issues and concerns.

The Beaufort Sea stock is the one that is shared by Alaska and Canada. Belugas from this stock winter in the Bering Sea and migrate north along the Chukchi Sea coast in spring, through leads in the ice, arriving off the Mackenzie estuary in June or July. On their trip north, they may be harvested by hunters from Diomede, Kivalina, Point Hope, and occasionally Barrow. In Canada they are harvested by hunters from Inuvik, Tuktoyaktuk, and Aklavik. Soon hunters from those villages and biologists will begin working on a joint management plan for this shared stock.

Alaska and Canada are cooperating in other ways to conserve and learn about belugas. In 1988, the Alaska Department of Fish and Game and the Canadian Department of Fisheries and Oceans conducted two joint projects to radio-tag belugas. One project took place at Cunningham Inlet on Somerset Island in the Canadian Arctic. An international team of biologists from Canada, Great Britain, and Alaska attached radio transmitters to four belugas and followed their movements for up to 12 days. Another team of Alaskans and Canadian biologists and hunters attached two transmitters to belugas in the Mackenzie. Planning is currently underway for future cooperative radio-tagging projects.

Alaskans and Canadians are also working together to study the population genetics of belugas. Whether the different management stocks are genetically discrete is one of the most important questions for beluga managers to answer. For the last two years, harvest monitors from the North Slope Borough Department of Wildlife Management have collected samples of beluga skin from whales harvested at Point Hope and Point Lay to send to a Canadian research laboratory at Queen's University. Samples are also collected from Mackenzie belugas by Canadian harvest monitors. Laboratory analysis will show whether the genetic code of the DNA is the same or different for the belugas that summer in the Mackenzie and those that stay in Alaska. Starting in 1990, the Alaska and Inuvialuit Beluga Whale Committee will fund its own small pilot project on the population genetics of belugas. In future years Canadians and Alaskans hope to continue their work together by conducting a joint aerial survey of belugas.

Kathryn J. Frost is a marine mammals biologist with the Division of Wildlife Conservation, ADF&G, Fairbanks. A Magazine of the Alaska Department of Fish & Game

## ALASKA'S WILDLIFE

September-October 1990 \$3.00

> 1990 Photo Contest Winners

Alaska's Marine Mammals: An International Resource

