

AGVIK!

Bowhead Whales in Alaska



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POPULATION

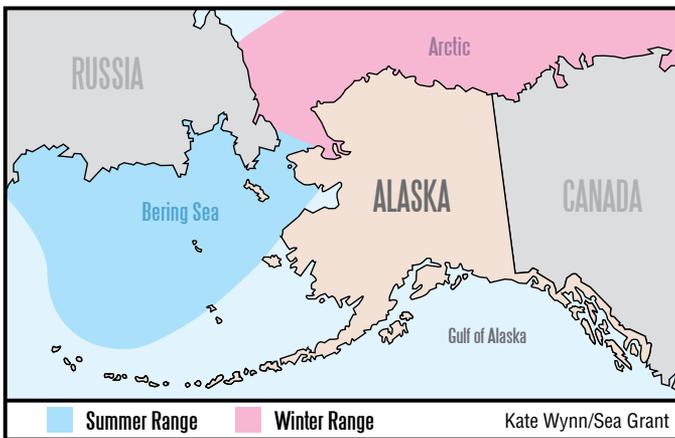
Over 10,000 bowhead whales migrate annually through the Bering, Chukchi and Beaufort seas in a population that is growing at a rate of 3.4% per year. Scientists estimate that the population numbered between 14,000 and 27,000 whales prior to extensive commercial whaling between 1848 and 1915. It may have dropped as low as 1,500 whales following the commercial whaling era.

The latest bowhead whale population estimate for the Bering-Chukchi-Beaufort population is based on visual counts of whales made during the spring of 2001 by North Slope Borough observers standing on sea ice north of Point Barrow, Alaska. Visual counts were checked by acoustic recorders that provided location data, showing where whales were heard. Scientists have conducted similar whale counts since 1976. They use these data, spanning 30 years, to estimate population abundance and trends.

NOAA Fisheries Service supports photographic studies which provide information on whale length and re-identification of individual whales. Results from aerial photography of bowheads can be used to corroborate abundance estimates, calculate calving intervals, and study migratory behavior.

Since 1981, the Alaska Eskimo Whaling Commission has contributed partial funding to Alaska's North Slope Borough for counting bowheads as they migrate past Point Barrow in the spring. The Minerals Management Service of the U.S. Department of Interior has conducted systematic aerial surveys of bowheads in the Beaufort Sea during their fall migration each year since 1979 in order to evaluate the impact of petroleum reserve development on bowhead whales.





MANAGEMENT

The International Whaling Commission conserves and manages bowhead whale populations worldwide under the International Convention for the Regulation of Whaling.

In Alaska, the U.S. government and the Alaska Eskimo Whaling Commission have jointly managed the traditional subsistence harvest of the bowhead whale under a cooperative agreement since 1981.

The Alaska Eskimo Whaling Commission allocates the International Whaling Commission quota among the ten Alaska Eskimo communities that hunt whales: Gambell, Savoonga, Wales, Little Diomedes, Kivalina, Point Hope; Wainwright; Barrow, Nuiqsut and Kaktovik. A part of the International Whaling Commission quota is also allocated to whaling villages in Russia.

All stocks of bowhead whales are classified as protected by the International Whaling Commission. The United States has classified bowhead whales as endangered under the Endangered Species Act and depleted under the Marine Mammal Protection Act.



BOWHEAD WHALE HUNTING IN ALASKA

For several thousand years, Eskimos have hunted bowhead whales. Europeans and people of other nations commercially hunted bowhead whales for oil, meat and apparel materials (such as corset stays, umbrella ribs, and buggy whips) from the 17th through the early 20th centuries. Today, Alaska Eskimos continue to hunt bowhead whales as a food source and for baleen and bone used in handicrafts.

The International Whaling Commission allotted Alaska Eskimos up to 75 harpoon strikes on whales in 2006, which included 15 strikes unused in 2005. Villagers made 39 strikes and consumed 31 whales for subsistence in northern Alaska in 2006.

Eskimo whalers are prohibited from taking either bowhead calves or whales accompanied by a calf. Only licensed whaling captains or crew under the control of those captains may engage in whaling. They may not receive money for participating in the hunt.

Each Alaska Eskimo whaling vessel holds a captain and harpooner plus other hunters. Harpoons currently have metal tips and explosive contacts. In addition, shoulder guns are used to fire small bombs that expedite the kill. The Alaska Eskimo Whaling Commission's weapons improvement program has improved hunting efficiency as well as providing a more humane method of taking the whales.





Bowhead Whaling Villages of Alaska

CONSUMING THE WHALE

It takes skilled people many hours to butcher a whale. Most people in each village participate in the butchering and distribution of the meat, fat, baleen and bone. Every whale is shared extensively within the Eskimo community. Many artifacts are made from bowhead 'hard' parts; in particular the baleen is used to make baskets, toys, fishing line, and art objects.

No person may sell or offer for sale whale products from whales taken in the hunt except for authentic articles of Native handicrafts.

North Slope Borough biologists measure and sample whales during the harvest whenever they can, taking small amounts of skin for genetic analysis, eyes for aging, reproductive tracts for pregnancy rates and baleen for isotopic analysis of diet. All biological studies, including sampling, tagging and surveys, are done under special research permits.

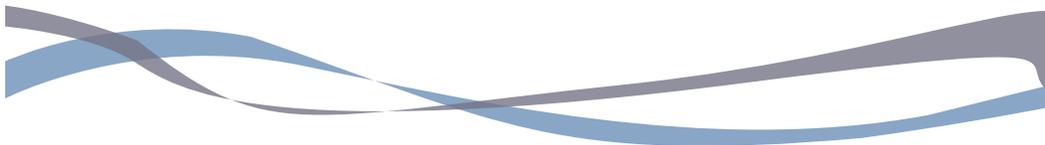
BOWHEAD WHALE PHYSIOLOGY AND BEHAVIOR

Bowhead whales can grow longer than 20 meters (65 feet) and weigh more than 68,000 kilograms (over 150,000 pounds). The heavy bones of a bowhead's huge head—nearly a third of the whale's whole length—allow it to push up through as much as half a meter of ice to reach the air and breathe. Bowheads have the thickest layers of skin and blubber of any whale, perhaps of any animal. This insulates them against the cold waters of the northern seas, where they remain throughout their lives, not venturing to warmer southern waters.

Bowheads eat mostly zooplankton such as copepods and euphausiids. They screen their very small prey out of the ocean water with baleen, which can exceed four meters (13 feet) in length. The baleen hangs from the roof of their enormous mouths in two rows of about 300 plates.

Bowheads will often dive for 15 to 20 minutes, then breathe several times at the surface for three to five minutes. Some records show that bowheads can remain underwater for over an hour. They are slow swimmers with average speeds ranging from three to five kilometers per hour.

Bowheads are very vocal; they sing extensively and call mostly in low frequencies. Scientists hypothesize that bowheads travel in acoustically-linked herds, communicating with each other over distances up to



10 kilometers. Some scientists suggest that bowheads may use sound reverberating off the ice and ocean surface to help navigate through icy waters.

In recent times, whalers have found ivory, stone and bone harpoon points in the blubber of newly caught whales. Six such finds have been scientifically documented. Alaska whale hunters have not been using this type of gear for over a century, which suggests the possible extreme longevity of some bowhead



whales. That impression is reinforced by research based on predictable, slow and regular change in aspartic acid in the eye lenses of living animals.

Studying eye lenses, scientists confirm that bowhead whales can live for more than 100 years.



Craig George / North Slope Borough
Points removed from bowhead whales

Contacts for more information

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Baleen

