

# JOHN BOCKSTOGE

## Utilization of the Bowhead Whale

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### INTRODUCTION

The hunting of bowhead whales has been a very important part of Eskimo life since before 1800 B.C. (Oswalt, 1967). Prior to the introduction of manufactured products to these people by commercial whalers and traders, the entire whale was used in one form or another to make tools, weapons, homes, and toys. With the passage of time, however, whale products have gradually been replaced by manufactured goods. This paper describes how the use of various whale parts has changed through the years.

### FOOD

The most important parts of the whale have always been the meat and muktuk (layer of blubber with skin attached). Together, the meat and muktuk provide a large percentage of the food supply for the Eskimos of several whaling villages during a successful whaling year. The meat is a major source of protein and B vitamins, and the muktuk provides vitamins D and A and calories which are needed in large quantities to stay warm in the Arctic (Davidson, 1972). Both parts are eaten raw, frozen, boiled, or fried. The meat is sometimes made into "mekiqag" by placing it in a warm place and slow-cooking it in its own juices for a few weeks (Anonymous, 1967). This product is always served at whaling celebrations. Whale meat and muktuk are used in trading and are highly prized by Eskimos all over northern Alaska and Canada (Anonymous, 1967). An estimated 10,000 Eskimos and Indians outside the whaling communities sup-

plement their diet with whale meat (Davidson, 1972).

Other edible parts of the bowhead whale are the liver, brain, heart, and kidney. The small intestine is turned inside out, cleaned, and eaten during the spring whaling celebration; the white gum material from around the base of the baleen is eaten raw; and clumps of blood from around the heart are sometimes consumed, but usually fed to the dogs (Robert Brower, pers. commun.).

Less desirable whale parts were once a very important source of dog food. Each dog consumed about 800 pounds of meat annually (Foote, 1965), so a great deal of hunting effort was required to maintain a team of sled dogs. A successful whaling season solved the problem for most of the year, but because snow machines have largely replaced the dog teams, much less meat and blubber are now used for animal food.

### HEAT AND LIGHT

Blubber has been traditionally rendered into oil through autolysis, by cutting it into small pieces, scoring it with a knife, and putting it into barrels (Davidson, 1972). The oil was used mostly as a fuel in soapstone and sandstone lamps with sphagnum moss wicks to heat and light igloos (Murdoch, 1885). It was also used as a dip for foods (Nelson, 1889), cooking oil (Anonymous, 1968), and, when mixed with red ochre, as a dye (Oswalt, 1967). Because of its value as a fuel, whale and seal oil were also used by coastal Eskimos to barter with inland people for caribou and wolverine skins (Oswalt, 1967).

### COMMERCIAL PRODUCTS

During the commercial whaling period, blubber was rendered into oil by heating and sold for use in lamps, for tanning leather and preparing wool cloth, and for manufacturing soap, candles, paints, varnishes, and lubrication oils (VanStone, 1958). One large bowhead whale yields up to 275 barrels of oil (Scammon, 1874).

Baleen, now used in artwork, has lost its importance as a raw material for the making of practical items. Its qualities of flexibility and formability once allowed it to be used in an almost endless variety of ways.

During the period of commercial whaling, the taking of baleen to be processed into corset stays, buttons, parasols, umbrellas, women's hats, upholstery, frameworks for trunks and suitcases, fishing rods, buggy whips, and carriage wheels and springs was a profitable business (VanStone, 1958). Each whale contained several hundred pounds of baleen, which sold for \$2 per pound in 1880 and \$4.90 per pound in

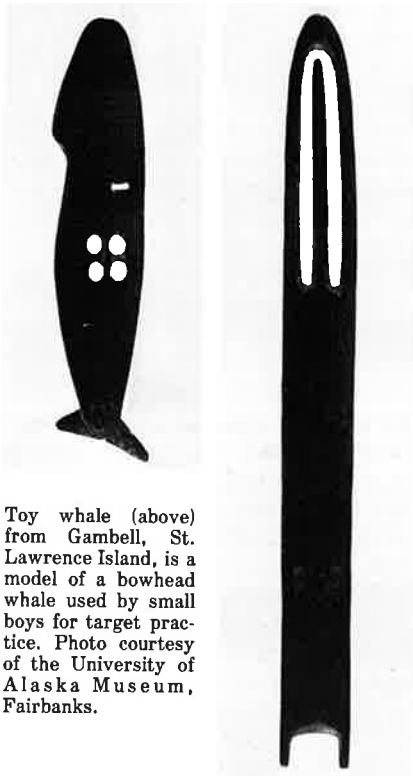


Workbox, 6.25 inches long, from Southwest Cape, St. Lawrence Island, has sides made of baleen. Photo courtesy of the University of Alaska Museum, Fairbanks.

1905, making a large whale worth up to \$10,000. Values such as these led to an increase in the number of whalers and a corresponding reduction in the number of whales. In 1885, 441,400 pounds of baleen from the Arctic were marketed, and in 1887 and 1889, 561,694 and 219,400 pounds, respectively, were sold. By 1905, only 38,200 pounds were taken despite a price of nearly \$5 per pound (VanStone, 1962). Baleen was replaced by other products shortly thereafter and the market was eliminated.

### ESKIMO IMPLEMENTS

The Eskimos cut baleen into strips, then braided and tied them into lines (Murdoch, 1885) which remained strong through prolonged use in salt water (Davidson, 1972). Because of this strength, baleen was a good material for fishlines (Oswalt, 1967) and boat and sled lashings (Ray, 1885). Baleen strips were also woven around the prongs of a caribou antler to make a scoop for removing ice from ice fishing holes (Murdoch, 1885). Baleen lines were used to make gill nets for catching whitefish (Oswalt, 1967), to tie sinkers onto the nets (Naval Arctic Research Laboratory Museum display),



Toy whale (above) from Gambell, St. Lawrence Island, is a model of a bowhead whale used by small boys for target practice. Photo courtesy of the University of Alaska Museum, Fairbanks.

to hold the mouth of dip nets open (Nelson, 1969), and as a mesh and support for crab traps (Oswalt, 1967).

Baleen was also used to make containers. Cups, dishes, and dippers were made by bending baleen around a wooden base, and buckets were made by sewing overlapping pieces of baleen together to make the sides (Murdoch, 1885).

Walking sticks had baskets like those on ski poles which were made of strips of baleen wrapped so as to form a circle (Naval Arctic Research Laboratory Museum display). Sleds, made by sewing several pieces of baleen together side by side, were easily carried while hunting and were used to drag seals or materials back to the village (Bandi, 1969). Sleds of this type are still used on St. Lawrence Island.

Baleen had many practical uses, such as knife blades for cutting blubber (Murdoch, 1885), rivets in many implements such as shovels, knives, picks, and harpoons (Murdoch, 1885), and as insoles in shoes (Oswalt, 1967). Strips of baleen were also used to hold the lids on boxes (Murdoch, 1885), and windows were made of the translucent membrane of seal entrail stretched by a piece of baleen (Murdoch, 1885).

Whalebone was also used extensively because it is strong and easily workable (Oswalt, 1967). The ribs of young whales, particularly ingutuks, made good, versatile sled runners because of their hardness and lack of pitting peculiar to the ribs of older whales. Sled runners made of whale ribs slid easily over tundra, ice, or snow (Sonnenfeld, 1956). Jawbones have been used as sled runners (Ray, 1885) and also as umiak keels to prevent wear while these boats are being dragged over the ice during spring whaling (Sonnenfeld, 1956). The jawbones and ribs were used as frames in building sod igloos (Sonnenfeld, 1956).

Whalebones were used in making the heads of mauls, handles for knives, the foreshafts of darts thrown with a darting board, the handles and blades of an adze, the blade of flint flakers, shafts of flensing knives, sinew shuttles, weaving tools, needle cases, pipe

Net shuttle 10.25 inches long (left), from Barrow, Alaska, was used for weaving nets. Photo courtesy of the University of Alaska Museum, Fairbanks.

bowls, water ladles, braces to protect the arm from the snap of a bow string, and net weights.

Hand clubs were made from a short blunt piece of bone, and a piece of whale rib lashed to a shaft made a mattock. The handle and blade of an adze could be made from whalebone, and the scapula or shoulder blade was used to make snow shovels (Murdoch, 1885). Harpoon heads were sometimes made from whalebones (Larsen and Rainey, 1940). In Point Hope, jawbones were used to support burial scaffolds (Davidson, 1972) and to form a palisade around the cemetery.

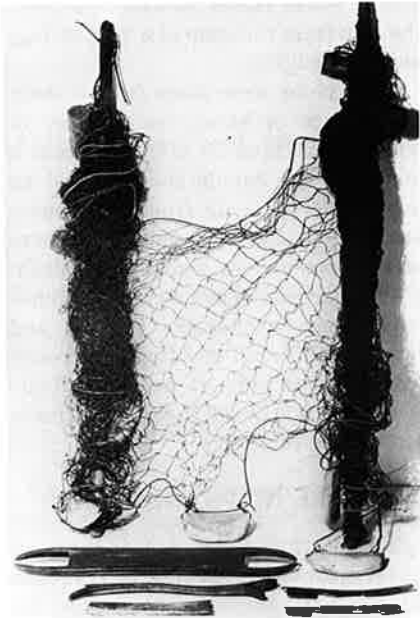
### ANIMAL TRAPS AND SPEARS

The flexibility of baleen was a quality useful for taking wolves and bears. Spring-baits were made by sharpening both ends of a 6-inch piece of baleen, wetting it, and then tying it, folded into lengths of 1.5-2 inches until dry. The baleen was then placed inside a piece of fish skin or blubber, and after an animal had ingested it, the moisture and body heat caused the folded baleen to straighten and pierce the stomach wall (Murdoch, 1885).

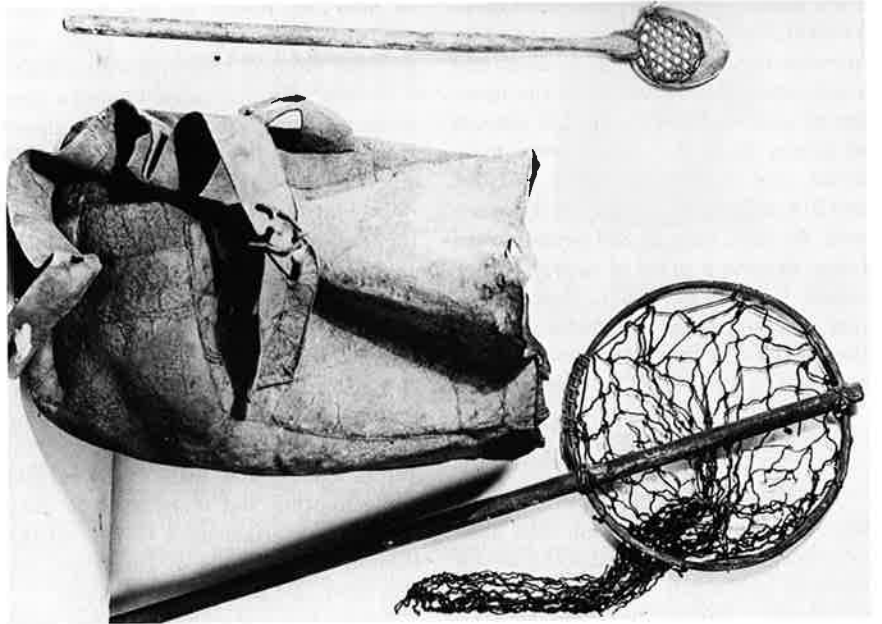
Nooses made of baleen were used to trap ground squirrels as they passed through their tunnels (Nelson, 1889) and also birds when they returned to their nests (Murdoch, 1885).

Fox traps were made by placing pieces of baleen over holes in the ice or snow and covering them with snow. Bait was placed on one side and a drift fence constructed so that the fox had to pass over the trap. In doing so, the fox fell through and was impaled on caribou antlers that had been placed in the bottom of the hole. In another version of this trap, strips of baleen were placed on the ice with their ends radiating inward to cover a large hole. When the fox fell through, the baleen snapped back into position and the trap was automatically readied for another animal (Nelson, 1969).

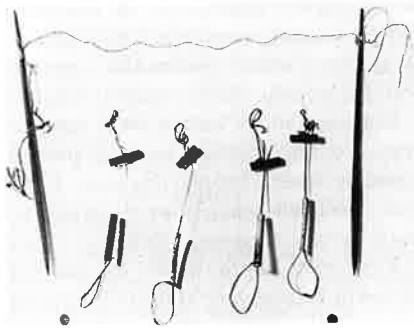
Baleen prongs with spurs on them were attached to the tips of fish spears so that when the sharp middle prong entered the fish, the flexible baleen pieces slid by, and the spurs became extended and kept the fish from sliding off (Murdoch, 1885). Bow shafts were sometimes made with baleen (Bandi, 1969).



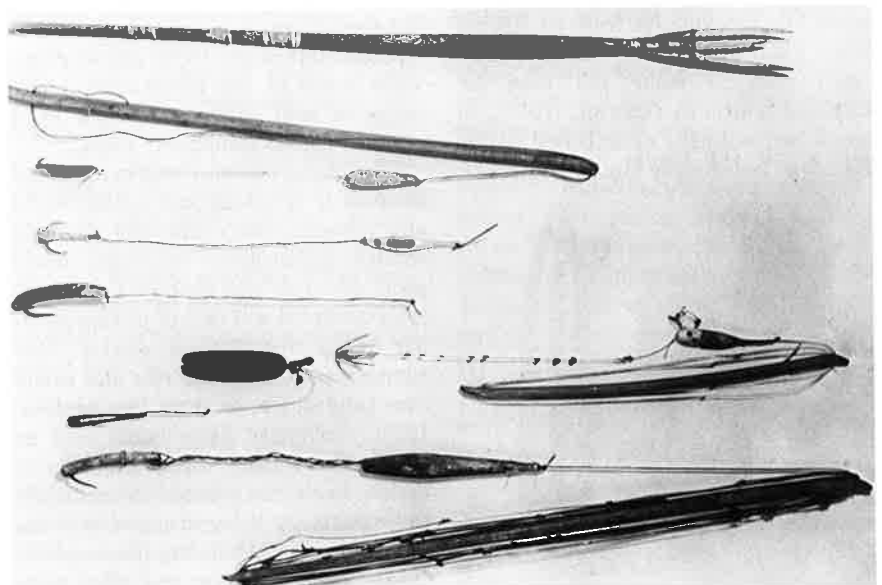
Gill net made with whale bone sinkers. Photo from the Van Valin Collection, courtesy of the University of Alaska Archives, Fairbanks.



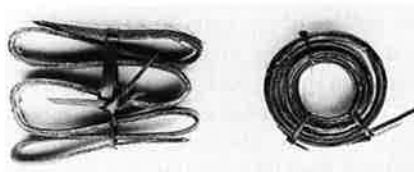
When fishing through the ice, this slush scoop is used to prevent the hole from freezing over by dipping out the constantly forming slush. The strainer bottom is made of whalebone, to which ice does not readily cling. Photo from the Van Valin Collection, courtesy of the University of Alaska Archives, Fairbanks.



Snare nooses of whalebone used to catch ermine and ground squirrels (Marmots). Photo from the Van Valin Collection, courtesy of the University of Alaska Archives, Fairbanks.

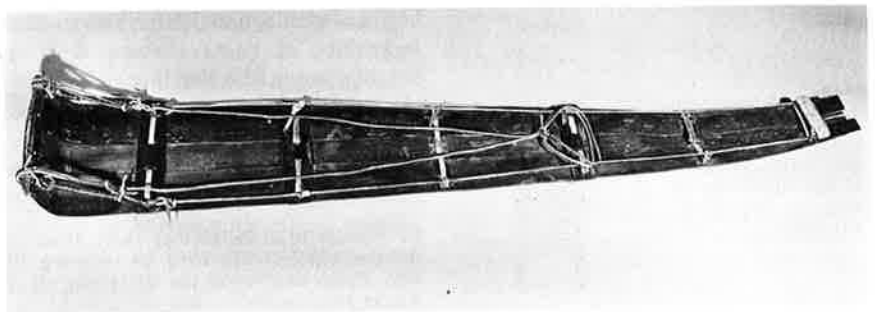


Fishing lines made of whalebone. Photo from the Van Valin Collection, courtesy of the University of Alaska Archives, Fairbanks.



"Death pills," used to help kill polar bears, are made of baleen strips sharpened at both ends and folded or wound like a clock. After being eaten, the "pills" open to pierce the stomach wall. Photo from the Van Valin Collection, courtesy of the University of Alaska Archives, Fairbanks.

Baleen sled, 73 inches long, (right) from Gambell, St. Lawrence Island, is used for hauling meat. Photo courtesy of the University of Alaska Museum, Fairbanks.



## TOYS

Many toys were made from baleen because of its flexibility. A marionette made from a fox skin supported by a piece of baleen down the back was worked with strings so that it would dart its head at a toy lemming (Murdoch, 1885). Baleen was also used to make a doll's arms so that when pushed, this toy would beat a drum or paddle a canoe (Murdoch, 1885). In addition, baleen was used to make a device used by boys to snap pebbles at targets and to sew liver membrane onto drums (Murdoch, 1885).

## ARTS AND CRAFTS

Baleen is now used almost exclusively in arts and crafts. Bracelets, baskets, miniature boots, sleds, and baleen etchings are most frequently made. Baleen is also used as inlay material in ivory, whalebone, and driftwood art objects (Davidson, 1972). The price of these items is rising rapidly. In 1974, a 5-inch high baleen basket with an ivory carving attached sold for \$80-\$120. In 1975 it brought \$150-\$200. Whalebone is now used in making such art objects as bears, birds, whales, and seals, and artifacts are often reproduced from this material.

## SUMMARY

The bowhead whales' value as food has not changed, even though a wide variety of domestic meat is now available to the Eskimo. As manufactured goods more convenient to use have become increasingly abundant in the Arctic, however, traditional uses of the bowhead whale have disappeared. Bone has been replaced by metals, baleen by rope and plastics. Driftwood, petroleum products, electricity, and (at Barrow) natural gas have replaced whale oil as heating fuels. Blubber is occasionally burned in camp stoves and ceremonial fires (Ed Wightman, pers. commun.) and is still used in whaling tent fires at Point Hope. In 1950, the people of Point Hope sent 40 drums of whale oil to Seattle in an attempt to develop a market for the product, but to no avail (VanStone, 1962.)

Other sources of information on this subject include: "The Eskimos" by K.

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Basket 5.5 inches high, made by Abe Simmonds of Barrow, Alaska, is coiled with dark and light baleen from the bowhead whale. Photo courtesy of the University of Alaska Museum, Fairbanks.



Baleen mouse snare from Gambell, St. Lawrence Island. Photo courtesy of the University of Alaska Museum, Fairbanks.

Birket-Smith, published by Methuen and Company, Ltd., London, in 1959; "Eskimo" by E. Carpenter, F. Varleur, and R. Flaherty, published by the University of Toronto Press, Toronto, in 1959; and "The North Alaskan Eskimo. A study in ecology and society" by R. F. Spencer, Bulletin 171 of the Smithsonian Institution's Bureau of American Ethnology (1959).

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