

A Review on the Technique Employed by the Makah Tribe to Harvest Gray Whales

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Introduction

The Makah Tribe is a small Pacific Northwest coastal tribe located on the tip of the Olympic Peninsula, Washington state, USA. Whales are central to Makah culture. A Makah whale hunt invokes ancient rituals and ceremonies that are deeply spiritual to the tribe. An important traditional food, whales are also the subject and inspiration for Makah songs, dances, carvings, and basketry. The hunt imposes a cultural purpose and discipline that benefit the entire community. Whaling is so important to the Makah that in 1855, when the Makah ceded thousands of acres of land to the United States government through the Treaty of Neah Bay, the tribe reserved its pre-existing right to whale in traditional areas. The Tribe's whaling rights guaranteed by the Treaty continue to this day and are subject to the U.S. government's trust responsibility to the Tribe.

In the 1920's, the Tribe voluntarily stopped harvesting Eastern North Pacific gray whales (*Eschrichtius robustus*) because their populations had been depleted by commercial whalers. By the 1990's, the gray whale stock had rebounded to historic high levels and was removed from the U.S. Endangered Species List in 1994. In May 1999, the Tribe harvested its first whale in 70 years under the management authorities of the Makah Tribal Council, the U.S. government, and the International Whaling Commission. Since then, however, the Tribe has been unable to hunt because of litigation filed by animal rights organizations. The Makah share a gray whale quota with the natives of Chukotka, Russian Federation that was issued by the International Whaling Commission.

Makah Tribe's Traditional Whaling Methods

The relationship between the Makah people and whaling is one of great antiquity. The Ozette archeological site on the northern Washington coast contains evidence of some 1,500 years of continuous whaling (Renker 2002). Archeological and ethnohistorical data demonstrate that the Makah hunted gray whales as well as other whale species (Huelsbeck 1988).

The Makah hunted whales from large canoes, approximately 36 feet (11 m) long and more than 5 feet (1.5 m) wide, which were carved from a single cedar log. Other equipment included mussel-shell harpoons, sealskin floats, and fathoms of line made from whale sinew and cedar (Waterman 1920). Whaling equipment and methods were constantly evolving. After contact with Euro-Americans, Makah whalers began to use metal harpoon heads at the ends of their traditional wood harpoons and accepted tows from steamers to and from the whaling grounds (Renker 2002).

A whaling crew consisted of a chief, or "whaler," and seven men. The whaler owned the canoe and the whaling equipment and acted as the sole harpooner. Other crew members included a steersman, a man responsible for managing the lines and buoys, numerous paddlers, and a man who had the unique responsibility of diving into the water and fastening the whale's mouth shut after the whale was killed.

The whaling crew would approach the whale on its left side and bring the canoe parallel to the whale. The whale was initially harpooned behind the front flipper from a distance of about 6 feet (1.8 m) (Waterman 1920). The Makah constructed the harpoon shafts from yew wood. The harpoons ranged from 13 to 18 feet (4 to 5.5 m) in length and the harpooner would hold the shaft at the center of balance. By using a long harpoon shaft and making a close approach from the canoe, the harpooner could thrust the harpoon directly into the whale rather than throwing it (Ingling 1999). Once the first harpoon had been driven into the whale and the first set of floats attached, the whale was pursued and killed with a long wooden lance. The process of killing a whale could take several days. Once killed, the whaling crew had to tow the animal back to land, a process which could take another two days. Whales were butchered according to strict protocols, which identified the sequence of the butchering, the portions of the whale reserved for ceremonial use, and the portions to be distributed to the crew and other village inhabitants.

Positions on whaling crews were restricted to men who could withstand the rigors of intensive ritualized training, possessed the hereditary access to the position and its ritualized knowledge, or underwent a supernatural encounter which engendered the gift of whaling ability. All crew members undertook rigorous ceremonial and spiritual preparations prior to the hunt; the success of the hunt depended as much on the observance of rituals as the strength and skill of the whalers. The families of the whalers were also expected to observe rituals to ensure the safety and success of the hunters.

Makah Tribe's Current Harvest Method

Once the Eastern North Pacific stock of gray whale had recovered by the 1990's, the Tribe was interested in resuming its traditional ceremonial and subsistence whale hunt. The Tribe wanted to develop the hunt in a manner that incorporated and retained the ceremonial aspects of the traditional hunt but also would employ a safe and humane harvest method.

The Tribe was interested in substituting the traditional killing lance for a large caliber rifle both to eliminate a prolonged pursuit and because the use of the killing lance would be considered inhumane by modern standards. The Tribe contracted a veterinarian with a background in ballistics and together investigated the performance of several high caliber firearms including the Winchester .458 Magnum, the Weatherby .460 Magnum, the .50BMG, and the .577 A-Square Tyrannosaur. The Tribe found that all of these weapons to be adequate, but the .50BMG and .577 A-Square Tyrannosaur to be the most potent combination. The .577 A-Square Tyrannosaur was selected for the 1999 hunt since it was a substantially lighter rifle (14 pounds versus 20 pounds for a .50BMG) and because it had a 3-round capacity (one cartridge in the chamber, two cartridges in the magazine) compared to the single-shot .50BMG caliber configurations which were tested.

Any of the .50BMG firearm/ammunition combinations are considered more than adequate to humanely dispatch a gray whale (Ingling 1997). The .50BMG caliber firearm is capable of shooting a 570 grain bullet at 3,200 feet/second and generating 13,000 foot-pounds of energy and the .577 is capable of shooting a 750 grain bullet at 2,460 feet/second and generating 10,000 foot-pounds of energy (Ingling 1999). Both of these firearm/cartridge combinations can penetrate 240 inches of water, and after using a correction factor, can penetrate the equivalent of 133 inches of flesh (Ingling 1999). The flesh covering the portion of the skull housing the brain is less than 10 inches thick and the flesh covering the portion of the upper spinal cord is about 18 inches thick on a 30 foot (9.1 m) gray whale (Ingling 1997). Considering the overwhelming firepower of a .50BMG or a .577 caliber firearm and the size of gray whales, this method is more than adequate to humanely dispatch gray whales.

The Tribe's hunt incorporated the use of a large caliber firearm held by a rifleman on a small skiff referred to as the "chaseboat." The driver of the chaseboat can maneuver the rifleman quickly to the harpooned whale in order to deliver a shot(s) at distances less than 30 feet (9.1 m) from the target area. By achieving a close proximity to the whale from the chase boat, the likelihood of delivering a successful shot increases and the risk of ricochet off the water surface is eliminated, accomplishing the Tribe's objectives of conducting a humane and safe hunt with minimal public safety risks.

The whale harvested in 1999 using the method described above expired 8 minutes following the initial harpooning (Gosho 1999). By using the cold harpoon for the initial strike and following it immediately with close-range, accurate shots directed at the central nervous system from a high caliber rifle, the Tribe was also able to limit damage to edible subsistence products.

Training and Safety

Makah whaling participants follow strict traditional protocols on training that are passed down through their families. In the late 1990's, the Tribe assembled a Makah Whaling Commission (MWC) composed of the heads of whaling families. One of the MWC's tasks was to establish formal training guidelines and certification of hunters. The riflemen selected to participate in whaling operations are experienced hunters and possess the skills required to harvest game such as sighting and "leading" a moving animal (Ingling 1997). Prior to pursuing whales, the hunters practiced under simulated hunting conditions.

Safety during whaling operations is an extremely important issue to the Makah Tribe. One member of the chaseboat team is designated as the safety officer. The rifleman on the chaseboat will not discharge his rifle until he has

authorization from the safety officer. The safety officer ensures that, prior to giving permission to fire, the vessel is within 30 feet (9.1 m) of the whale and that the field of view is clear of all persons and vessels.

Conclusion

The Tribe's current harvest methods retain all of the ceremonial aspects of the spiritual, physical, and mental preparations required for a traditional Makah whale hunt. The substitution of a high caliber rifle over the traditional killing lance is necessary to ensure a safe and humane harvest and eliminates a prolonged pursuit. The Tribe's harvest techniques are more than sufficient to quickly and humanely dispatch gray whales.

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