Heritage of the Sea
THE HISTORY OF WHALING
by Craig Rowland, Roosevelt High School

Abstract

My report is on the history of whaling from its early days to the present. I will cover the different methods of whaling and also advances in whaling technology. I will also talk about the International Whaling Commission and whale conservation laws.
THE HISTORY OF WHALING

Whaling started in many different places and with many different techniques.

In some European countries, such as France, Spain and Iceland, lookouts would be situated on the mountains and in towers. When a lookout spotted a whale, whalers would venture out and harpoon it. Since they did not go far from the coast, each village took only one to six whales a year.

Around the middle of the sixteenth century, Europeans began looking for more and bigger whales by going on long sea voyages. They would sail to a bay and stay there for a whole season.

Long before this, the Eskimos had been hunting whales in a different manner. These people, riding in twenty-five foot long vessels, would shout as loudly as possible, supposedly to make the whale stop for a moment, thus giving the harpoonist a chance to throw his harpoon. The harpoon was connected with a line to a number of buoys made of animal skins. The man who planted the first harpoon would take charge of the whaling party. When the whale came back up after diving, it was harpooned again. Thus after a while the whale would be further extinguished by the leader as a hole was cut in the whale's side through the blubber. A final lance was then jabbed through the hole. The whale having been killed in this manner was towed to shore and allotted among each member of the party.

Indians at Vancouver and Queen Charlotte's Islands used similar techniques in whaling. One difference was in the materials used for the harpoon heads. The Indians used mussel or abalone shell, whereas the Eskimos used ivory or stone harpoon heads.
A very unusual method of whaling was used by the Aleuts. Using only one or two man kyacks, they would make a stab at the whale with a poison-tipped spear. The whale died within a few days and might or might not be washed up on the shore. The mark on the spearhead identified the hunter who had killed the whale. The whale was usually shared with the finders. The poison was made from fermented aconite root. When the Aleutian Islands were first discovered by European explorers, the Aleuts tried to keep secret the method of making the poison. They told the explorers that the poison was made from oil which had been boiled out of a dead rich whaler. This method of whaling was also employed by the natives of Kamchatka Island and Kurile Island as well as by the people of Hokkaido, Japan.

The rest of Japan, however, used a different technique. Their technique was similar to that of the Europeans. Harpoons were attached to their boats with lines, but they also used nets. The whales would be chased by boats into shallower water where the nets were waiting. Once the whale was entangled in the nets, the harpoon boats rowed near and planted their harpoons deep into the blubber. The whale was harpooned as many times as it surfaced. When the whale was near exhaustion, the lancing began. Some whales had to be stabbed in over a hundred places, but other, smaller whales needed only two or three stabs to kill them. Before the whale died, a hunter jumped up on its head and cut a hole in the end of its snout. A rope was tied from this hole to one of the boats. After this two boats lined up on either side of the whale and men with ropes swam under the whale and made a support of rope between the two boats. After this was completed, the whale
was finally extinguished with lances and long knives. The whalers all chanted "May its soul rest in peace" and "Thank God and Buddha for the whale." The whale was then towed back to the shore where factory workers began work on the whale.

American whaling began in the middle of the seventeenth century. At first only coastal whaling was conducted, but then as whales got fewer in number they went after bigger and more whales. The height of the American whaling occurred in the middle of the nineteenth century, with about seven hundred whaling ships operating. In 1849 however, many whalers left the sea to look for gold. The Civil War also took many whalers away from the industry. After the war petroleum was discovered and the demand for whale oil began to drop steadily. Besides the American sperm whalers all over the world, there was a North Pacific fleet that worked in the Arctic. Most of this fleet was crushed by the ice in 1871. Thirty-four ships out of forty-one were stranded by the ice, but not one man out of one thousand was lost. Whaling also took place in the Hawaiian Islands, starting around 1819 and lasting for approximately fifty years. Lahaina, Maui was the whaling capitol of Hawaii. The whales caught were humpbacks which migrated down from the Arctic to breed and spend the winter. American whaling ended around 1914 with the outbreak of World War I. After the war, an effort was made to revive the industry, but when the "Wanderer," the last American square-rigged whaleship, was wrecked the day after she put to sea, it was the end of the fleet. Although the United States put restrictions on the kind of whales killed in American waters, a total ban on all U. S. whaling did not come until 1972. Thirty-nine whales were taken by the last shore station at Richmond, Calif.
Many changes have taken place since the early days of whaling. One of the bigger changes was that of the explosive harpoon. It was invented in Britain in 1840 and developed in Norway by Svend Froyn. The present-day harpoon has a four-barbed warhead which contains a grenade. The grenade is exploded by a time-fuse. Another big change was the introduction of steam power. With faster boats, faster whales could be caught. Up until then, blues and other large whales were too fast for man-powered boats. The first factory ship put to sea in 1925. The factory ship made it possible for whaling ships to stay out longer than they could before. It was possible to process a whale on board while catcher boats pursued the rest of the pod. By 1930, there were thirty-eight factory ships operating in the oceans of the world.

In 1946 the International Whaling Commission was formed to protect "the great natural resources represented by the whale stocks." The Commission did not do very much except to divide up the world whale population among its members. For years the Commission set quotas higher than the numbers they knew the whalers could catch. They also had a rule that any nation can be exempt from any rule that it doesn't like. In 1972 the U. S. delegation proposed a ten year moratorium on all whaling. This moratorium was not passed until 1979. The moratorium calls for no factory ship whaling except for that of the small minke whales.

The whaling ships are getting rusty and will not be replaced. Hopefully, the whales can hold out until the ships are gone.
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ANCIENT FISHING METHODS
by Alice Jean Motooka, Hana High School

INTRODUCTION
Living in a community where the Hawaiian culture is still preserved, I decided to do my research on ancient fishing methods still used in Hawaii today. I used library resources for descriptions of ancient Hawaiian fishing methods and talked to modern fishermen to get information about today's methods.

RESULTS OF RESEARCH
Customs Concerning Fishing
For ancient Hawaiians, the ocean was relied upon as a travelway, playground and a place to get their main source of food. The majority of their protein came from marine life and little from land animals.

Everyone from the keiki to kupuna went fishing, either as a sport, work or just for fun. The keiki would play in tidal pools, catching black crabs and picking off pipipi. The wahine spent days collecting reef fish and limu in their ipu. The kane would do the more challenging and difficult methods in deeper waters.

The Hawaiians worshipped Ku'ulakai, the god of fishing, and constructed shrines along the shore. Each fisherman had a personal fishing god called an 'aumakua. The gods usually took the form of a plant or animal. The fisherman would pray and offer fish at the shrines. For important ceremonies, priests offered certain kinds of fish to the gods. Alii ate only certain kinds of fish that the common people could not eat. The red and white colored fish were usually used for the ceremonies.

A man could not become a fisherman by just going down to the beach to fish. There were many preparations before becoming a fisherman. They were honored
people and not anyone could become one.

The fisherman had to make careful preparations before going out to fish. There were strict kapu which governed the making and lashing of the hooks. When hooks were to be lashed, the fisherman warned the family the day before, so no kapu was to be broken. No one was allowed to peek in windows or doors, run in and out of the house, or make any kinds of noise. Everything had to be done in complete silence and no one could interrupt the fisherman or look at his work. No one could ask him questions, talk to him, or visit him. Lashing had to be done at a particular time of the day. It had to be done in the afternoon and could never be continued after sunset. If the fisherman could not finish before sunset, he would put his work in anipu very carefully and place it near the ceiling. He would never touch it again until the afternoon of the following day. When everything was completed, the hooks and lashing, the fisherman would go to a corner of his house to say a prayer to his 'āumakua.

The fisherman's wife was not supposed to gossip, sleep, or quarrel with anyone while her husband was fishing. On the way to the canoe landing, the fisherman was not supposed to talk to anyone. If he should meet a blind man, he must turn around because this would bring him bad luck. No one was allowed to call or talk to anyone else in the canoe. In the canoe, no one was permitted to speak to the fisherman. All eyes were forward; the men paddled and watched in silence until they arrived at the fishing ground.

The first fish caught each day was marked by cutting off its tail. This fish was given to the fisherman's 'āumakua. As soon as they returned to shore, the fisherman took his first fish to the shrine and offered it as a sacrifice. This was done to bring luck and success.

To become a fisherman, one had to accomplish certain ceremonies. As soon as a beginner caught his first fish, he could not continue. He would return to shore and give his fish to an old fisherman or to a kahuna. The man who got
the fish would cut it into small pieces, wrap them in ti leaves, and cook them. The cooked pieces were placed on a table and the novice fisherman said a prayer to all the 'aumakua of the East, North, South, West, Sky and of the Deep Sea. All of the advanced fishermen were invited to attend the ceremony. After the prayers were said, all the fishermen sat down to eat. Although the observers were not invited, they could help themselves without an invitation.

The new fisherman would collect all the fish bones from the table. He would return them to the sea followed by a prayer. After this ceremony, he was now considered a fisherman.

Every fisherman had to know all the arts of fishing. The managing of his canoe was also important. A canoe that was overturned demanded a great deal of skill and hard work. Sometimes the task took them all day in the water. The Hawaiians were not afraid of sharks. If one of their favorite hooks was bitten off, they would dive in and try to get it back.

Ancient Hawaiians preserved their fishing grounds by having kapu. A certain area was off limits for a month while another was opened. Also, certain kinds of fish or other sea resources could not be taken at certain times of the year.

Fishing Methods

Hand fishing was a simple and inexpensive method used by both sexes in shallow water around rocks. They would dive down and thrust their hands around rocks and corals where the fishes would not be able to escape. This method took a lot of skill and patience to be able to catch a fish with bare hands.

Nets were not introduced to Hawaii until the Japanese brought them in the 1890's. The Hawaiians quickly adopted this method because of its effectiveness along the shore lines. The Hawaiians made their net twines out of the fiber of the olona or hopue plants because of its strength and lightness. The weights on the outside were made of shells, rocks or pieces of coral. The nets had
different shapes and varieties.

The throw net is still popularly used for catching fish that swim in schools near the shore. After throwing the net into the water, the fisherman jumps in and gathers up the open bottom of the net to trap the fish in. Throwing a net takes a lot of practice so it will open properly. Most beginners start by using a small net. Fishermen today often use Polaroid sunglasses to help cut the glare of the water so they can see the fish.

When Hawaiians made their nets out of the olona plant, they would cut bundles of the plant shoots and soak them in running water for four to five days. When it became clean, they would spread it out on special hardwood platforms, six feet long and eight to ten inches wide. The inside fibers of the bark were scraped with a piece of pearl shell or turtle rib. After the fibers were bleached dry in the sun and stripped into fine threads, the actual making of the cords began. The strands were rubbed together between the palms or against the thigh. This job was done by the women and it took long hard hours. When the cords were ready, the men would do the net making. A net was made to catch certain types of fish, or those closely related, so the dimensions were made accordingly. When the net was finished, it was dyed with the juice of the kukui bark. This was done several times to protect it against the salt water.

The hukilau was done as a community activity. This was usually done in a sandy bay area. The equipment used included a large net, two ropes of two or three hundred feet long with strips of ti leaves tied every twelve inches, and three or more canoes. One canoe was the fisherman's and carried the ropes two or three miles off shore. The ropes were tied at the two ends of the hukilau net. The two assisting canoes then took the ropes and paddled away from the center in opposite directions heading to shore. The head canoe would remain in the same place until the two canoes formed a semi-circle. The frightened fish would swim out but get caught as the net was pulled in. Everyone joined in by
pulling at the ropes and the fish were shared among all. Akule fishermen use similar methods today, although the nets are made of suji and the weights are lead. The boats used have motors. The initial spotting of the school is done by airplane or spotters on high cliffs wearing Polaroid sunglasses. Those who help still get to share in the catch.

Torch fishing was frequently used in ancient Hawaii. Kukui nut kernels were strung on coconut midribs with a handle made of a bunch of ti leaves. The oily nuts produced a smoky, golden glow.

Today, kerosene hand torch and gasoline lanterns are used for night torch fishing. This type of fishing is done in shallow water along several miles of shoreline. The night air should be still, the tide low, the moon hidden and the water clear.

The spears used for torch fishing were made out of kaula, o'a, koaile, uhiuhi and other hard woods. They were about six to seven feet long, slender and sharply pointed at one end. Modern torch fishermen use a three pronged metal spearhead on a wood or metal shaft.

Poisoning was another method used by ancient Hawaiians. Fish trapped in tide pools at low tide were sometimes caught with poison juices from the 'akia and 'aauhuhu bushes. This didn't kill the fish but made them dizzy and easier to catch. The plants had no effect on humans. The leaves of these plants were pounded into bits and placed in small tapa cloths and stuffed in puka where the fish hide. This procedure was done quickly because the effect was soon lost. According to my interviews, plant poisons are infrequently used today. However, some people use Clorox or dynamite which is highly illegal. If caught, they face stiff fines and sometimes prison sentences. This shows a sharp contrast to the old days, for an ancient fisherman would never use methods such as these that permanently damage the tide pools.

There were many types of bait used in ancient Hawaii. There were two types
used, the live and dead bait. One of the live bait used was the iao, a slender, silvery fish about two inches long. These fish swim in large schools and are caught with dip nets. Opae or shrimps that are found in stream and ponds were used as well as the common black crabs.

A favorite bait of early Hawaiians was the ink bag of the octopus. They would remove the ink bag intact from its head and dry it under the shade for several days. Just before going fishing, they would take 1/2 teaspoonful of ink from the sac, wrap it in ti leaves and bake it for a few minutes until it was thick as molasses. Then finely grated coconut meat and a pinch of salt were added to the ink. A dab of this mixture was put on the hook. In the water this would send out a smell and attract the fish.

Other kinds of bait used were kukui and coconut meat baked together, shrimp dried and pounded, wana with its shell broken to expose meat, roasted sweet potatoes, raw ripe papaya, opihikōlo, earthworms and puhi. Various kinds of limu were also used as bait.

Nehu, iao and akule were used as live bait. These fish were caught in the early mornings.

Today fishermen still use limu, black crabs, puhi, and octopus meat for bait. Live bait is still used, and the state is investigating ways to raise some types of bait for aku boats. There are some additions such as frozen squid or shrimps, and canned sardines.

Hooks of ancient Hawaiians varied in sizes, shapes and colors. Their hooks were made out of turtle shell, bones of animal and humans, woods and ivory from the whales. The bones of great warriors and fishermen were highly prized for making fish hooks. It was said to have the mana that the person had. A fish hook made from the bones of a person who had little hair on his body would be lucky. Such bones were supposed to be smooth and this would attract the fish. If a fisherman's hook broke while he was out fishing, he
The fisherman later knew that his wife had committed adultery when he was gone.

In choosing or making a hook the fisherman must determine the size of the mouth of the fish he wishes to catch. Then he must consider the sharpness of the point of the hook.

Modern fishermen do not make their own, but have a choice of many commercially made metal hooks. However, an individual fisherman may have his own personal method of lashing hooks to his line.

**CONCLUSION**

Today, anyone can become a fisherman and not go through any ceremonies and initiation requirements. Some of the methods used in old Hawaii are still used today but refined with modern equipment. Some people still use techniques taught by their kupuna. The Hawaiians used the kapu system as a plan of conserving the supply of marine animals for their future generations. Although the kapu system does not exist today, there are restrictions limiting the capture of certain species during certain months and making some areas kapu to fishing. There are game wardens employed by the state to protect and conserve marine life. Since they can't be around all the time, it is left mostly up to the individual. For example, one must put back a big, juicy, egg-bearing lobster when caught in the off season. This shows the respect that the fisherman has for the sea, and a responsibility to preserve the life of the sea for future generations.
GLOSSARY

AKIA - fish poison plant
AKULE - mackerel
ALI'I - nobility
'AUHUHU - fish poison plant
'AUMAKUA - personal god, totem
HOPUE - plant source of fiber
HUKILAU - surround net fishing
IAO - bait fish
IPU - gourd, calabash
KAHUNA - priest
KANE - men
KAPU - forbidden act or place
KAULIA - hard wood, a native tree
KEIKI - children
KOAI'E - hard wood, a native tree
KUKUI - candlenut tree
KU'ULAKAI - god of fishing
LIMU - algae, seaweed
MANA - power
NEHU - bait fish
O'A - hard wood, a native tree
OLONA - plant source of fiber
OPAE - fresh water shrimp
OPIHI - limpet
PIPILI - periwinkles small snails found in spray zone
PUHI - eel
SUJI - synthetic cords
UHINU - hard wood, a native plant

WAHINE - women

WANA - sea urchin

BIBLIOGRAPHY


HANA FISHERMAN'S CLUB
by Gizelle Matsuda, Hana High School

INTRODUCTION

In Hawaii, fishing is one of the most important and necessary industries for its people. There are many small fishing communities throughout the islands. One such community is Hana, which is located on the northeastern tip of Maui, with a population of 2,000 people. This small community has formed a unique public service organization, The Hana Fisherman's Club, which is operated by and for the people.

STATEMENT OF PROBLEM

Although I have known of the existence of the Club, I really had no concept of its history, organization, and the benefits it provided.

METHODS OF RESEARCH

There is very little written literature about the Club, so my resources were limited to personal interviews.

RESULTS OF RESEARCH

The history of the Hana Fisherman's Club goes back to the time of Lokahi Pacific in 1965. Lokahi, a non-profit organization was designed for the low-income families in Hana. It maintained close communication with its members, and worked together to benefit the community and meet its needs. Lokahi was funded by the government and provided training programs for its members which developed a greater understanding of the business world. These programs also provided an opportunity to make decisions affecting their future and the future of many low-income families of Hana. Lokahi also has scholarship funds available for the children of its members.

Projects that were beneficial to their community were planned in meetings and carried out by members. Fishing and Agriculture were the main projects that Hana
provided for its people. From the government, Lokahi was given three boats for fishing, diving gears, a surplus truck, the ice house and other facilities which were put to use by the members. "During its operation, it put a lot of members on their feet, on their own, not depending on the government".

When Lokahi Pacific ceased operations in Hana in 1973, many of Lokahi's members were still interested in selling and buying fish and providing non-profit services to its members and the community. The result was the formation of a private club which they called The Hana Fisherman's Club. Although membership is unlimited, members pay dues and must be approved.

The purpose of the club is to provide public services to the community in the form of improvement projects and fund raising activities.

During the first couple of years, the club members raised money to purchase a boat, trailer, and other fishing equipment from Lokahi, as well as a new boat engine, a battery operated Beacon electronic beeper, and an ice-making machine.

All Club members participate in the various fund raising activities. The most profitable activity for the club is to buy and sell ocean products. Salt Salmon. Fresh Cod, and Butterfish are sold by the pound and sold at a lower price than in markets. Opihi is sold by the gallon. The club buys the fish and opihi from the seller, pays them cash and then sells it for a small profit. These products are distributed from Keanae to Kaupo by storing them in crushed ice coolers on trucks. The club once sold fish and opihi to other areas of Maui when they had a surplus truck which was purchased from Lokahi. It had originally been given to Lokahi by the government. With the loss of the truck, the buying and selling of fish and opihi to the other side of Maui ceased. As a result, the Club was limited to the community of Hana.

The selling of fish is done at the chill-room, known as the "ice house". Active members also participate in door to door selling. This money is then used to pay the

1 Alfred Kahookele, Interview at his home. 5:30 P. M. December 29, 1979
lease on the ice house and operating expenses.

Another community service that the club provides is renting the ice house for storage. This service is an economic necessity for the Hana community. It primarily facilitates the three main occupations of Hana, which are fishing, agriculture, and hunting. Without the ice house these people would lose a tremendous amount of money. The ice house and its surrounding area is used by other organizations of the community such as the Canoe Club, the Hawaiians Baseball Club, and the many community luaus that take place in Hana throughout the year. One unusual use is float-building: each year one of the high school classes uses the area to build their elaborate float for the annual Aloha Week parade. A recent public service of the club was painting Hana Elementary School's playground equipment.

CONCLUSION

The Hana Fisherman's Club seems to serve many useful purposes in the community. An organization of this type would be useful in any similar community. In the future, perhaps this club can become a Fisherman's cooperative which could be even more useful and provide opportunities to qualify for government funding. As inflation continues, it becomes more important in Hawaii to attempt self sufficiency. An organization like this that helps agriculture and fishing could become very important in helping to maintain good standard of living necessary to Hawaii's people.

REFERENCES CITED

Jean Carey, interviewed by Gizelle Matsuda, (at her home in Hana), 5:30 P. M. December 28, 1979. Jean is the Club's Secretary.


Alfred Kahokele, interviewed by Gizelle Matsuda, (at his home in Hana), 5:30 P. M. December 29, 1979
BY LAWS

HANA FISHERMAN'S CLUB

ARTICLE I: NAME
The name of this organization shall be The Hana Fisherman's Club.

ARTICLE II: OBJECT
The object of this club shall be to provide non-profit services to its members and the Hana community in general, specifically, in the use of facilities and equipment, selling and buying fish, and chill room use, with the approval of the membership.

ARTICLE III: MEMBERS
Section 1. There shall be no limit in numbers to the membership.
Section 2. Any adult resident of East Maui shall be eligible for membership, provided that such resident shall be screened and approved by the club membership. A person, so approved, shall be declared a member of the Club upon payment of initiation fee and dues for the first six months beginning with the month of acceptance.

Section 3. The initiation fee shall be $5.00. The monthly dues shall be $2.00 for males and $1.00 for females. The Treasurer shall notify members who are three months in arrears. Those whose dues are not paid within one month of notification shall have their Club privileges withdrawn.

Section 4. Upon the recommendation of one member, seconded by another member, and by a three-fourths vote by the membership at any regular meeting, honorary membership can be conferred upon any adult who shall have rendered notable service to the club.

An honorary member shall have none of the obligations of membership in the Club,
but shall be entitled to all of the privileges except those of making motions, of voting, and of holding office. Honorary membership shall last for one year and may be extended indefinitely upon the recommendation and approval of the membership.

Section 5. All members of the Club shall be required to participate in all Club functions, if, at all possible. Regular meetings and fund raising projects are mandatory. Judgments and penalties shall be rendered by the membership on an individual basis.

ARTICLE IV: OFFICERS

Section 1. The officers of the Club shall be a President, a Vice-President, a Secretary, a Treasurer, and a Sergeant-at-Arms. These shall perform the duties prescribed by these bylaws.

Section 2. The officers shall be elected by ballot at the regular meeting in December and assume offices on January 1. All terms of office shall be of one year's duration.

Section 3. No member shall hold more than one office at a time, and no member shall be eligible to serve more than one consecutive term in the same office.

Section 4. The duties of the officers shall be as follows: The President shall preside at all meetings while overseeing and authorizing all the functions of the Club: the Vice-President shall assume the duties of the President when he is absent or resigns, post notices of meetings, and be a Club representative to the community and public; the Secretary shall record minutes of all regular and special meetings, and prepare all correspondences and notices; the Treasurer shall perform all of the general bookkeeping, prepare written monthly reports, receive and give receipts, authorize checks (with President), and provide reports at all regular meetings, the Sergeant-at-Arms shall keep order at all Club functions.

Section 5. The officers shall hold all keys to Club facilities and equipment. The officers shall be available to all members when locked facilities and equipment are requested for use.
ARTICLE V: MEETINGS

Section 1. The regular meetings of the Club shall be held on the second Wednesday of each month unless otherwise ordered by the Club and/or the officers.

Section 2. Special meetings can be called by the President or by the request of five or more members.

Section 3. Eight members shall constitute a quorum for regular meetings.

Section 4. There shall be no drinking at/during regular meetings.

ARTICLE VI: COMMITTEES

Section 1. A committee consisting of the President, the Treasurer, and three members of the Club in general, shall serve as an Audit Committee to check Club finances. This committee shall perform its duty before the regular meeting in December, or, before the new officers assume office in January.

Section 2. Special committees may be set up at any regular meeting in order to perform any special functions prescribed by the Club membership.

ARTICLE VII: ICE HOUSE RENTAL

Section 1. The rental fee for the use of the ice house shall be $5.00 a day for beef and $3.00 a day for pork, unless otherwise ordered by the Club majority.

Section 2. Members shall receive credit for the first and last days of meat storage.

ARTICLE VIII: AMENDMENT OF BYLAWS

These bylaws can be amended at any regular meeting of the Club majority vote, provided that the amendment has been introduced as New Business at the previous regular meeting.

Parliamentary authority used as reference:
