Hawaiian Canoe Building

by Koakanu

[The following article, attributed to a man named Koakanu, is from Fornander, Vol. 5, 610-614.]

Canoe building was one of the industries of ancient Hawaiians, and it is still carried on to this day. This is how it is done: when a man desires to go up to the mountain forests to get a tree to build a canoe, he must first prepare a pig, red fish, black fish and various other things as offerings to propitiate the forest deities. When these things are ready he comes home and invites dreams in his sleep. If they are good dreams, he will go up to the forests; but if they are unfavorable, he won't go.

A woman should not go along with him to the mountains; that is wrong. Should a woman go along, the canoe would crack.

When he arrives at the place where the koa tree selected for his canoe stands, he kindles a fire for an imu to cook the offerings. After the fire is kindled, he gets a chip of the koa tree and burns it in the imu; when all the offerings are cooked, prayer s are offered to the canoe-building gods: to Kupulupulu, Kumokuhali'i, Kuolonowao, Kupepeiaoloa, Kuho'oholo-pali, Kupa'aike'e, Kanealuka, and various others; then he eats some of the food and throws some to the gods. When all these things have been attend ed to, the tree is ready to be cut.

[Kalokuokamaile, who chose the goddess Lea as his canoe-building patron, used the following chant before cutting down a tree:

O Lea, woman who builds canoes,
Goddess of canoe making,
I have come up to cut a tree for a canoe.
Here is my payment, an offering,
A sacrifice for you, O Lea.
Here is red fish, a red loin cloth.
Grant me much skill, strength, and thought,
Grant me patience.
Make into trifles
all hindrances and obstacles,
In front, behind, And on all sides of the tree I cut.
Guide my adze to its target,
Let the chips fly at each stroke
Until the work is finished.
Amama, the prayer is freed.

(E Lea, ka wahine kua wa'a,
Akua kalaiwa'a,
I pi'i mai nei au e kua,
E 'oki i ku'u la'au wa'a,
Eia ka'u uku, 'alana,
Mohai ia 'oe e Lea,
Eia ka i'a 'ula, malo 'ula,
E ha'awi mai i ka 'ike a nui,

Ka ikaika, ka no'ono'o,
Ha'awi mai ia'u i ke aholoa,
O na alalai, o na ke'ake'a
Mamua, mahope,
A ma na 'ao'ao o ku'u la'au e 'oki ai,
E ho'olilo ia lakou i 'opala,
E ho'opili pono i ka maka o ke ko'i,
Ma ku'u wahi i makemake ai,
'Aole ho'opakua i ku'u ko'i,
Pa no lele ka mamala,
Ahiki i ka pau ana,
'Amama ua noa.)

After the pig was cooked, the part offered to the gods was accompanied by the following prayer:

O Lea, woman who builds canoes,
Goddess of canoe making,
And Mokuhali'i and Kupa'aike'e,
Male gods of canoe making,
Here is pork,
A pork gift, a sacrifice, an offering
From Kalokuokamaile.
Grant him much skill,
Skill and mana (power), unlimited mana;
you are obliged to him for his pork,
'Amama, it is freed.

(E Lea, ka wahine kua wa'a, akua kalaiwa'a, ame Mokuhali'i, Kupa'aike'e,na akua kane kalaiwa'a, eia ka pua'a, he pua'a uku, mohai, 'alana ia 'oukou na Kalokuokamaile e ha'awi i ka 'ike a nui, ka 'ike mana, kana mana palena 'ole, a nolaila, ke 'ai'e nei 'o ukou i ka pua'a a Kalokuokamaile, 'Amama, ua noa.)]

The tool used for cutting in the olden times was a stone adze, ground until sharp and tied to a handle. When cutting down a tree, first dig away the dirt so that the roots show, then cut down the tree. It would take one man almost a week to fell a tree; i f many hands worked together, the tree could be felled in two days. Nowadays we have iron axes, and because of their sharpness a tree can easily be cut down; a strong man can cut down a koa tree in half an hour.

After the tree is felled and before it is shaped into a canoe, more prayers are offered to the gods. After rough-shaping the log and making it light, the canoe is hauled down from the mountain and placed at a site prepared for it. After three months or mo re to cure the wood, the finishing work is done on the hull and the other parts of the canoe are attached.

This is the way to build the other parts: the wood for the sides and tops of the canoe is the 'ahakea; you need four rims (kupe) and two rails (mo'o). The four rims are called ki'apu'apu (the forward curving portion of the canoe's rim, generally known as the manu); ho'onoluonolu (the straight part of the rim); oio (a between section of the rim); and unu (the stern curving portion of the rim, known also as the aft

manu). These rims are hewn so as to fit along the rim of the canoe hull and are tied on to th e canoe with the 'aha (sennit).

When the canoe is finished, the ceremony known as lolo is performed (the hog-sacrifice ceremony, when the deity is invoked to witness the canoe's satisfactory completion). Should the ceremony be performed without any interruption, then the canoe would be a sound, but should the ceremony be interrupted the canoe would not be sound, or else trouble would come to the owner of the canoe. After this ceremony, the ama and the 'iako (outrigger and its two connecting arms) are shaped and tied on; then the wae (br aces inside of the canoe near the 'iako to stiffen and strengthen the sides of the canoe); then the kuapo'i (weatherboards covering the canoe fore and aft).

[Kalokuokamaile describes the lolo ceremony as follows: Everything was assembled to finish the canoe--the ama, the 'iako, the cords to bind the 'iako, and the wae. An imu was lit to roast a pig. The pig bristles were removed, and the pig roasted. Then the owner brought the canoe-making expert a live pig. The expert released the pig into the hull. If the pig went from stern to bow and leaped out, it was a good canoe, and the life of the pig was spared. If the pig went as far as the bow and laid dow n, then it was cooked in the imu. While the pig was roasting in the imu, the 'iako and ama were lashed to the canoe and the other parts joined on. When the pig was cooked, the head was cut off and set apart for the canoe-making expert, and the rest of the pig was cut up for the people gathered at the ceremony. The expert then petitioned the gods of the canoe makers:

O Mokuhali'i, Kupa'aike'e, Lea,
Here is pork,
A payment, a gift, an offering,
A sacrifice to you.
The canoe is finished,
Ready to be launched into the sea,
Its home where it will seek profit and wealth;
Watch over it carefully
Be alert for coral heads and stone heads of the reefs,
For the waves and the swells of the open ocean.
Guide the canoe over the depths of the sea,
Let the canoe ride over the waves of the sea,
Till it is worn out, overgrown with limu, and aged.

(E Mokuhali'i, Kupa'aike'e, Lea, eia ka pua'a, he uku, he makana, he 'alana, he mohai ia 'oukou. Ua pa'a ka wa'a, a e ho'olanaia aku ana i ke kai, o kona. 'aina ia e huli ai i ka loa'a ame ka waiwai.

(E nana pono loa 'oukou, e maka'ala i na puko'a, na pu'upohaku o kahi laupapa, na nalu, na 'ale o ka moana. Ho'oholo no 'oukou i ka wa'a ma kahi hohonu o ke kai; i hele ai ka wa'a a nalukai, a 'apulu, a ulu ka limu pakaiea, a kaniko'oko'o.)

[The canoe was then carried down to the ocean and paddled a short distance out. The builder called from shore, "How is the canoe? Is it good?" (Pehea ka wa'a! Ua maika'i ka wa'a?") When the owner answered, "Yes, the canoe is good,"("'Ae, ua maika'i ka wa' a"), the work on the canoe ended.]

Those people who build canoes for a living are called kahuna kalai wa'aÑcanoe-building priests. This occupation is a hazardous one, often resulting in death. I worked at it from the time I was twelve years of age. It is, however, a profitable industry if one should persevere in following it; because a canoe log four fathoms (24 feet) or more, even though not completed as a canoe, could sell for $40.00. If completed it would bring $80.00 for some, and more for others.

Supplementary Information from a man named Kauwenaolu: Before the canoe-making priests go up to the mountain, they sharpen their stone adzes until the edges are keen. If they have a favorable dream at night, they go up to the mountains; if they do not hav e a favorable dream, they should not go up. Here is another important thing: on going up and reaching the forest, if they should hear the 'alala (Hawaiian crow), the idea of building the canoe [from that particular log] should be abandoned, because it is evident to them that the tree is rotten inside. If they don't hear any noise from birds until they come to the canoe tree, those priests are happy.

Here is one prayer upon cutting the trunk and its branches: "E kua i uka, e kua i kai, e kua i o, e kua ia nei, e nana e ka la i kamana wa'a, e 'ike e ko luna, e 'ike e ko lalo i ke 'oki ana o ka kakou wa'a." ("Hew mountainward, hew seaward; hew there, he w here. Watch over, O sun, the canoe builder. Witness, those above, witness, those below, the cutting of our canoe!")

Then these men begin cutting the tree until it falls. If the canoe is for fishing purposes, a different prayer is offered for the hewing of that canoe tree. If it is intended for sale, another prayer is used at its felling. There are also separate divisions in the prayer for cutting off the branches and the trunk, for shaping the trunk, for hauling the partly-shaped log down to the beach, for the construction of the canoe, and for launching it into the sea. The only trouble is I do not know those parts of the prayer.

About the Koa Canoe (From Fornander, Vol 5, 630-636)

During the period when Hawai'i was unenlightened (na'aupo), the people had already acquired the art of constructing canoes. The best koa forests, both for the size and quality of the trees and the convenience of getting the partly hewn trees from mountain to shore, were in the Hilo and Kona districts of Hawai'i and the Hana district of Maui. The Hawaiian people were able to construct canoes which reached about ten fathoms (60 feet) long, and smaller canoes which reached from four to six fathoms long. In depth, some of these canoes reached the armpit of a person when he stood inside of one of them. However, a common man was seldom seen in one of these large canoes, as they were mostly used by the chiefs in the old days. The depth of the smaller canoes is like the depth of canoes we see nowadays.

The Adze (Ko'i): The adzes used for for cutting down and hollowing out the trees in those days were made of hard stone, seldom seen nowadays. The stone was called 'ala, basalt, and the principal quarry was high up on the slope of Mauna Kea. These stones a re harder than ordinary; there were no metal axes in those days.

Cutting Down ('Oki) the Tree: When the canoe-building priest goes up and comes to the tree desired for a canoe, he looks first at the main branch, and where the main branch extends, towards that side is the tree to be felled. If the falling tree lands on

another tree, the omen is bad [it is not right]; if it falls clear, it is good. After the tree is felled, the 'elepaio bird, the god of the canoe builders, alights on the tree. If the bird runs back and forth, without pecking the tree here and there, then flies away, it is a good canoe. If it pecks along one side from the front to the back, then hew that side for the mouth of the canoe. If it pecks on on both sides, the log is rotten; better leave it alone. There is a prayer for cutting off the top, but I have not obtained it.

Shaping (Kalai) the Canoe: In shaping a canoe the outside is shaped first, and when the outside is finished, then the inside. At this time, however, no particular way of shaping is observed; anyway of hollowing the log is allowed, so that the canoe may be lightened for dragging down to the beach. The canoe is nicely tapered in the front, and is large and full in the rear. Some projections ("pepeiao," or "ears") are left on the insides of canoe; as many as four, five or perhaps six, according to the wishes of the priest and the size of the canoe. These projections are used for attaching the outrigger, the mast, and the seats. When the shaping is done, then the canoe-building priest reports to the owner that the work is completed. If the owner wishes to go up and view the canoe, then he accompanies the priest; if he does not so wish, the canoe is left alone until it is seasoned; then it is hauled down to the shore.

Hauling (Kauo) the Canoe to Shore: Hauling the canoe is another important job. It can not be done with only a few men; there must be many, perhaps forty, sixty, or eighty, according to the size of the canoe; a small canoe requires fewer men. The day set a part for hauling the canoe is a day of much pompÑlike the day of a funeral of a famous man. Men, women, children, and sometimes chiefs go up to the mountain. Food, pigs, chickens, turkeys (palahu), and fish, enough to feed the multitude, are taken up.

When the people arrive at the place where the rough-shaped canoe was left, preparations are made for dragging it. A rope is tied to the neck (maku'u) cut at the stern of the canoe, and when the ropes are ready, a chain of workers takes up positions from w here the rope is tied to the canoe neck to the end of the rope far ahead. Strong men are placed at the end of the rope, so that the rope will be kept taut when being pulled, and will not slacken, tangle, and hurt the men when the canoe slides down a steep hill.

The canoe is hauled until it is brought to a moderately steep hill where it is impossible for many to pull together because of the steepness. There the people are reassigned, and fewer men are required to pull the canoe down the hill. It is then that we s ee the skill of the man who guides the canoe downhill; it is then that he displays his great ability. When the preparations are complete, the man who will steer the canoe down the hill rides on it. Those who were selected to pull commence pulling, and the canoe moves along until it attains a good speed, when the men who are pulling desist and the canoe guide (ho'okele) takes over. A canoe coasting down a hill goes faster than a galloping horse.

If the path is rough, the canoe can be turned toward a smooth place; if a large tree or a stone is in the way, or the path is crooked, the canoe might be broken; it is up to the man guiding the canoe to prevent the canoe from being wrecked. Arriving at a flat area, the multitude hauls again, and thus they go until the house for building the canoe is reached. But if it is a half-witted man who directs the canoe, or a man with

little ability, trouble will follow from the outset. I saw this happen continually at my birthplace.

The ho'okele (canoe guide) rides in front by the neck for attaching the ropes; he holds on to a short rope and a small stick made fast to the neck. The stick is used like the rudder of a ship. If the canoe swerves from the path selected, the stick is used as a lever to head the canoe properly. The ho'okele can direct the canoe to any chosen place or step back into the canoe while it is coasting, or restrain the canoe so that those who are dragging it are unable to do so.

The Finishing Work (Kalai Ho'omaika'i): If the priest is hewing a canoe in a house, then the rule is that an 'aha cord be stretched across the door of the house from side to side, so that people would not enter to talk, thereby diverting the attention of the canoe-building priest, and perhaps causing the canoe to be broken by careless hewing. Hence the 'aha cord is placed across the door, so that a person would come and talk from the outside, but is unable to enter the house. If that person has something important to say, the work is stopped and the conversation is then held. This is a rule strictly adhered to by some canoe-builders.

The finishing work on a canoe can begin from the front or the rear. If the hewing begins on the left side, do not switch over and work on the right side, for the work would end up defective. If the work begins at the bow, continue from that direction unti l the stern is reached, then quit; do not change the direction of the hewing. Likewise, if you begin hewing from the stern then continue from that direction until the bow is reached, then quit. Do not hew from the bow, then from the stern, on the same sid e, or there might be a gap (puka) in the middle.

Adzes: There are two kinds of adze used for building canoe: ko'i kupa, an adze for digging out the inside, and any other rough work; and ko'i wili, a reversible adze used for finishing work. The ko'i kupa is used for digging out the inside and rough-hewin g the outside [of the canoe] when the wood is still thick; and when it is thin then the ko'i wili is used for the finishing work. The koi wili is used in hewing both wide and narrow places.

Other Parts of the Canoe: When the canoe is finished, the wae (brace to stiffen and support the sides of the canoe) are placed in position; these parts are attached to the niao (the top rim of the hull), along with the manu (curved bow and stern pieces). The wae are made of 'aiea wood. Sennit is used to fasten these parts onto the canoe. When that is done, the 'iako (outrigger boom) and the ama (the outrigger) are attached; these parts are for steadying the canoe at sea. The proper woods out of which to m ake these parts are the hau and the wiliwili.

Three other kinds of wood (besides koa) were used in building canoes in ancient times--the wiliwili, the kukui (candle-nut tree), and the ulu (breadfruit tree). The wiliwili is yet being used. The kukui is not much seen at this time. The ulu is used for repairing a broken canoe; great skill is required to make the patching blend into the original canoe.

Painting: The paint used to daub the canoe black is called amaumau. Cane leaves and nanaku (rush) from the stream are burned; the ashes are collected and placed in a container, then mixed together with kukui gum. This mixture forms the black paint to adhere to [and protect] the wood.