HAWAIʻI - LEGENDS
BALAZS FILE 1 OF 3
HAWAIIAN HISTORY

— honu (Released by Japanese ...) fish hooks, net spacers, jewelry (ornaments) Capt. Cook's fly swatter, Medicine

— honuea

— poikahea (white headed ... Pukui ... Kinkoe)

other names for "Turtle" in Pacific

— kāhonu — ~~turtle~~ CRAB

— pahonu — ~~turtle~~ pond

— Loko-wai-honu — pond in hana

— moku pipapa

— place name (on Kauai?)

— Kahoolawe place name ~~...~~ Honukanaenae

References

— place on Molokai (?)

— Polihua

— Honuapo (Big Island)

— Petroglyphs

HAUPU Hill

Ho Honu
Seamount
Big IS.

— Hill on Molokai

— Hill at Hilo (?) Puu Honu

North Oahu ("Papaanui IS." "Turtle Bay")

— Maui — Kapo gap

— Honu Pt — Kauai

— HONU Street — Aiea 96701 —— phone Book

— KUHONU Place — Kaneohe 96744

— WAIHONU Street, Place — Wahiawa — 96786
+ fish pond — Hana

See small green note book for possible other place names

see p16 graybook

KAMAKAHONU — The eye of the turtles

kona

MANAMANA → Pukui – check source

microfilm → See N.Y. Times L.A. Times

Ka-lae-o-ka-honu (Kauai) – ~~Ashuni~~ See Kikuchi

.... ea place name

TITLE

Sea Turtles in Hawaiian Folklore

Sort files at HIMB
to ① Hawaii
other ② Pac. Is. countries (folders
③ composite

Isle culture is entwined with olona

By JAN TenBRUGGENCATE
Advertiser Kauai Bureau

LIHUE — When you picture a culture without nails, the cord to bind things becomes of immense importance.

The Hawaiian culture had a cord that was so good there once were proposals to develop an industry around it, and it was tested by the U.S. government and proved better than the common hemp.

Indeed, wrote Marie C. Neal in "In Gardens of Hawaii," early traders to the islands would buy it for their rigging.

The cord — in different thicknesses it served as netting thread, tough fishing line and cables — was made from an inauspicious plant, the olona.

In Samuel M. Kamakau's "The Works of the People of Old," a book made of newspaper stories written in 1869 and 1870, is this:

"Olona was highly prized by one and all. It was very valuable for trading and planters raised it extensively. It was the main item for obtaining fish, for of it were made nets, long fishing lines, ropes, every kind of binding cord of which man had use, and other things besides."

Among the other things, it was tied into a closely-knit netting that was used as the base for feather cloaks and helmets. The feathers of colorful birds were tied to these pieces of netting.

After organs were removed during the embalming process, olona fiber thread was used to sew up the body cavities.

The stone blades of adzes were tied to their wooden handles with olona string.

Among the reasons it was so prized are that the cord made of olona is extremely long-lasting, sturdy and it will not kink.

The plant was once cultivated, and just a few acres of olona would make a man wealthy, wrote Kamakau.

Among the places it was grown and turned into good rope were Hana to Kaupo on Maui; east Molokai; Hamakua and Kohala coasts on the Big Island; and above Wahiawa on Kauai.

Olona: "highly prized by one and all."

"It grows in rainy areas, in marshy places, and in those parts of the mountains that are always mossy from water and rain," Kamakau wrote.

But despite a test by the U.S. Bureau of Standards proving olona stronger than hemp, by 1888, when W.F. Hillebrand wrote "Flora of the Hawaiian Islands," olona was found "in deep ravines of all islands, but by no means common."

The plant's scientific name is *Touchardia latifolia* and it is a member of the nettle family. Its relative, mamaki, was a main source of tapa fiber in old Hawaii.

The long, straight shoots of olona, which have leaves as much as 16 inches long and 9 inches wide, were collected and the bark removed in strips six feet long. This would be soaked for a few days in running water.

Later, skilled workers would use blades of pearl or turtle shell to scrape off the pulp and free the long fibers. The fibers were then bleached in the sun and braided or twisted into cord of the size required.

It was not fast work. Kamakau says a fine-meshed fishnet could take as much as a year to make.

The job of scraping the fiber to remove the fleshy pulp left a pile of fiber next to the worker. E.S. Craighill Handy, in "The Hawaiian Planter," recalls the story that Kamehameha, shortly after his birth, was hidden to escape death by Alapai, who had heard prophesies that Kamehameha would be ruler.

The baby Kamehameha was taken to the uplands of Kohala, the story goes, and suckled by a woman who scraped olona. To prevent suspicion, she kept her own child hidden under the pile of olona fiber.

Depsite its strength, the fishnets made of olona were treated to keep them strong with regular immersions in a tea made of the inner bark of kukui trees. The dipping left the nets a reddish color, says Otto Degener's "Plants of Hawaii National Park."

Hawaiians And The Sea

. . . "Born is the Pahau fish living in the sea guarded by the hau tree living on the land."

. . . "Born is the laumilo eel living in the sea guarded by the milo tree living in the land."

. . . "Born is the 'a'awa fish living in the sea guarded by the awa plant living on the land."

These stanzas are from *Kumulipo*, the Hawaiian chant that recounts the creation of the world. It has been compared with the book of Genesis.

In the Bible, the earth and its creatures were created on the third day, but the ocean's life did not appear until the fifth day. In the *Kumulipo*, the creatures of land and sea were created in counterpoint—from simplest to complex—in an order strikingly similar to that found in modern biology texts.

Each land species had a counterpart in the ocean, as expressed in the three stanzas above. The integration of earth and ocean is a central theme of this Hawaiian chant.

HAWAIIANS AND THE SEA

The ocean saturated all aspects of life in ancient Hawai'i. Religion, food-gathering, art, play, war, love—all were splashed by the sea.

Hawaiians depended on both the land and the sea for their food. This dependence forged a complex culture that perceived of earth and ocean as counterparts. Elements of each pervaded the other.

In continental cultures, earth and ocean are often distinct elements: one maternal and sustaining, the other threatening and violent. What Magellan viewed as his adversary, Hawaiian chiefs saw as their sustainer.

This book is based on an exhibit at the Waikiki Aquarium. It highlights some of the relationships that ancient Hawaiians felt with the ocean and its creatures. We hope that as you read it, you will view the marine organisms of Hawai'i as important cultural elements. The symbol () means that the animal or plant can be seen in a live display at the Waikiki Aquarium.

Edited and written by Leighton Taylor
Layout and Design by Mary Morioka
Line Drawings by Rebecca Brown
Artwork by John McLaughlin
Photographs by Ben Patnoi

FISHING

Fishermen followed the advice of *kahuna*, some of whom were specialists in the biology of sealife. Selected areas and species were protected seasonally and violation of *kapu* could result in execution. Conservation and resource management were literally matters of life and death.

The most highly developed techniques were practiced by men who held an esteemed position in Hawaiian society as a result of this activity. Women gathered marine life only in nearshore areas.

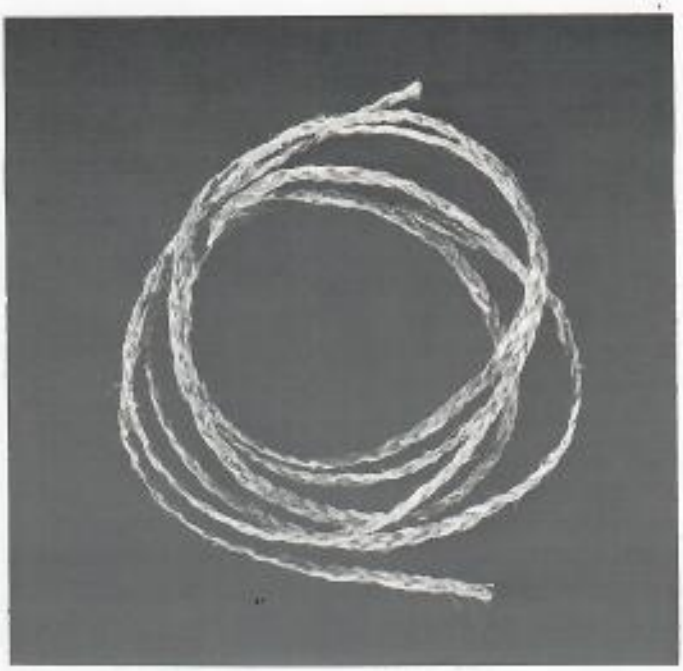
Fishing was a highly developed technology in Hawai'i, and it provided most of the protein for the Islands' people. Fish and invertebrates were collected using a variety of methods, including nets, hooks, plant poison, spears, and traps. The fabrication of fishing gear involved sophisticated and elaborate skills.

"Maniere de punir de mort un coupaele aux iles Sandwhich," Jacques Arago 1981

WOMEN'S ROLE

Fishing was highly structured in Hawaiian society. Women were prohibited from many areas and activities, and many kinds of fish were also forbidden to them. Women were restricted to the nearshore: to reef flats, beaches, tidepools, and mouths of streams.

They were adept at netting, snaring, hand capturing, and gathering of seaweed, but were considered to jeopardize open sea fishing. If a departing fisherman encountered a woman while on his way to the fishing grounds he would abruptly cancel his trip.



SENNIT

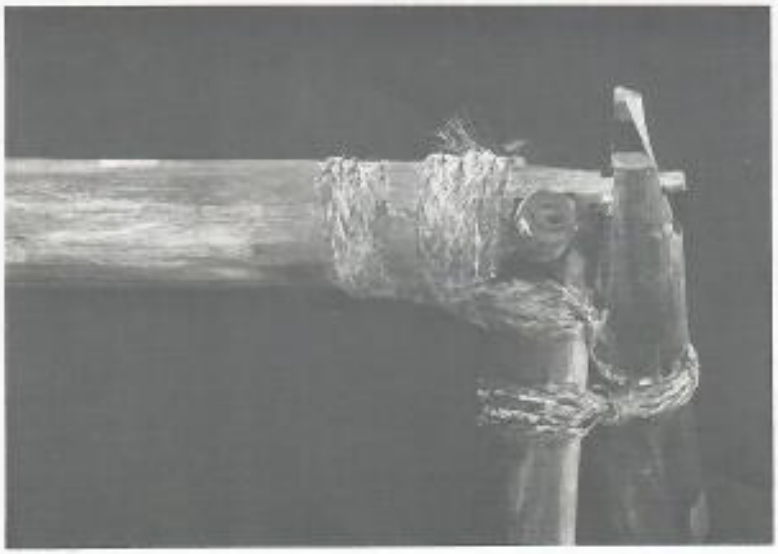
The Hawaiian blend of land and sea are exemplified by the fabrication and use of sennit. Land plants were essential components in Hawaiian fishing. Coconut, *hau*, and *olona* provided sennit for fishing line, nets, and hook lashing.

Captain Cook considered *olona* line better than the best manila hemp, and refitted his ships with Hawaiian cordage.

SALT

Hawaiian salt was a mixture of land and sea. Ocean water was poured into lava evaporating pans to become pure white salt crystals. Red earth was added to the dry salt, perhaps for its iron content. The manufacture of salt was an ancient Hawaiian industry unique in Polynesia. Early European visitors, including Captain James Cook, eagerly traded for it.

Kaua'i was famous for its excellent salt, and extensive lava salt pans can still be seen there. Today, Honolulu markets sell a version of Hawaiian salt with the typical red coloration.



LASHINGS

Skills that were useful on land had important applications at sea. Strong sennit cord (made from coconut fiber) lashed both house poles and canoe parts. The methods of winding the line were very similar.

NETMAKING

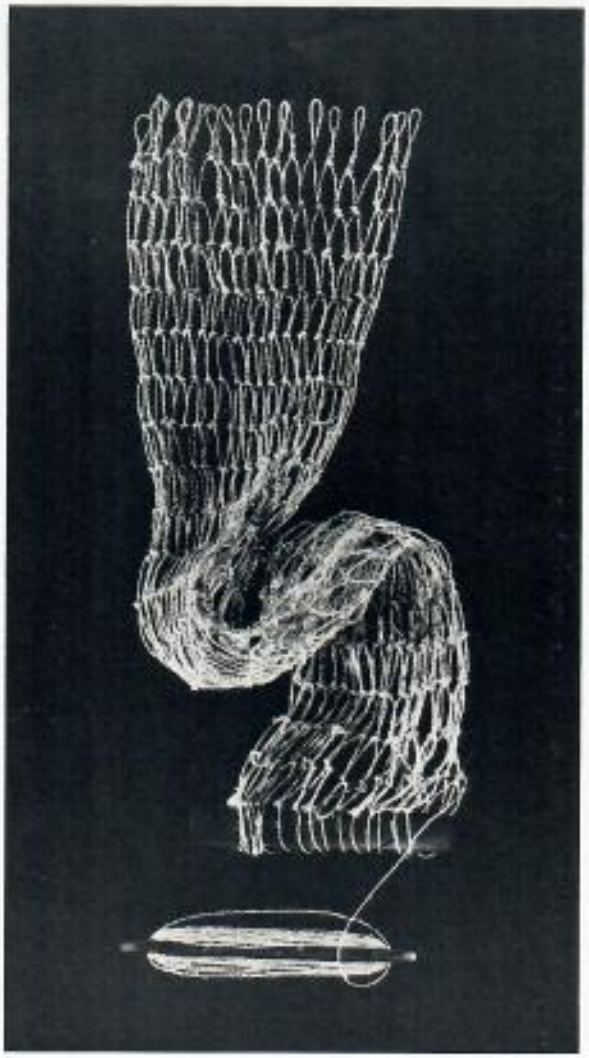
Nets were vital for catching a great variety of fish, and netmaking was a highly-developed skill. Coastal and upland plants provided essential raw materials.

Coconut and *olona* provided strong fiber. Wood from *milo* and *hau* (both of the hibiscus family) made excellent floats, while *kukui* bark afforded a preservative dye.

The Hawaiians were quick to adopt new methods and materials. For instance, the throw net, unknown to Hawaiian culture, was introduced by Asian immigrants in the 19th Century and was soon modified for Hawaiian conditions.

Modern nets are made from plastic line, but the same techniques are used in hand sewing. A spacer controls the mesh size and a shuttle acts as a large sewing needle to thread the knots. Hawaiians used various materials for spacers and shuttles, including wood, turtle shell, and bone.

Different species of fish required different netting techniques. Some Hawaiian nets are small for scooping; others are over 300 feet long for beach seining, or *hukilau*. Large nets represented an enormous investment of labor, and were given individual names. These nets often were used for generations.



Spacer and Shuttle

Throw Net

USE OF NETS

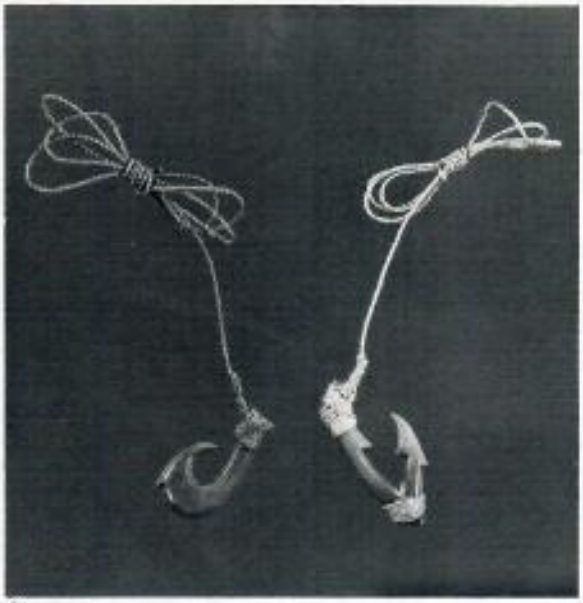
Scoop Net

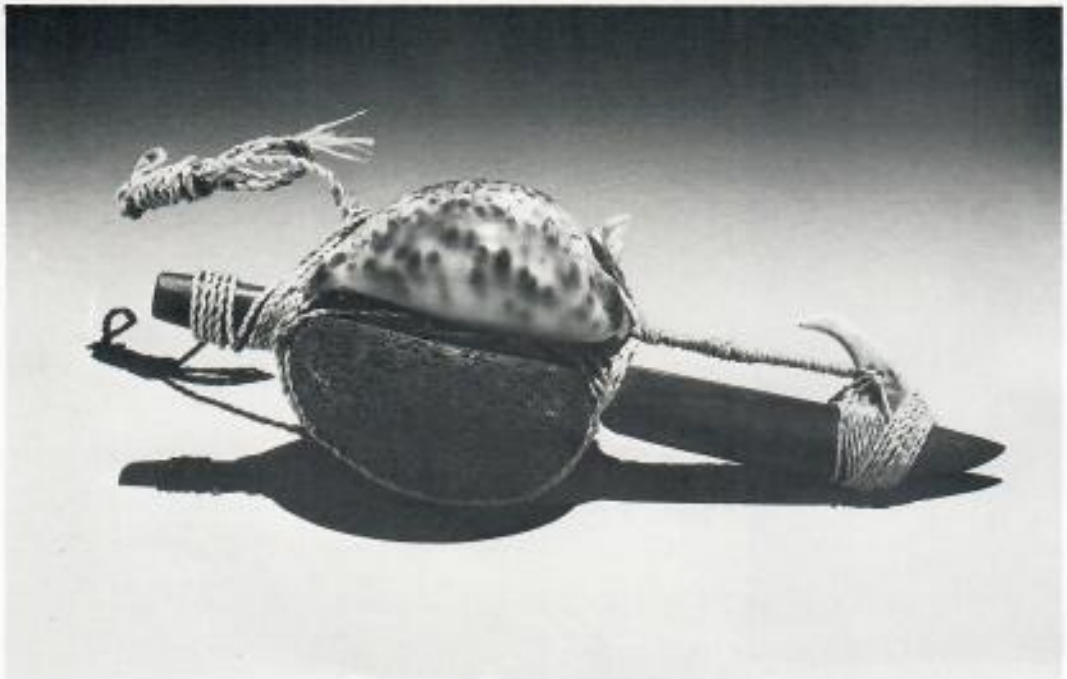
Seine Net

HOOK TECHNOLOGY

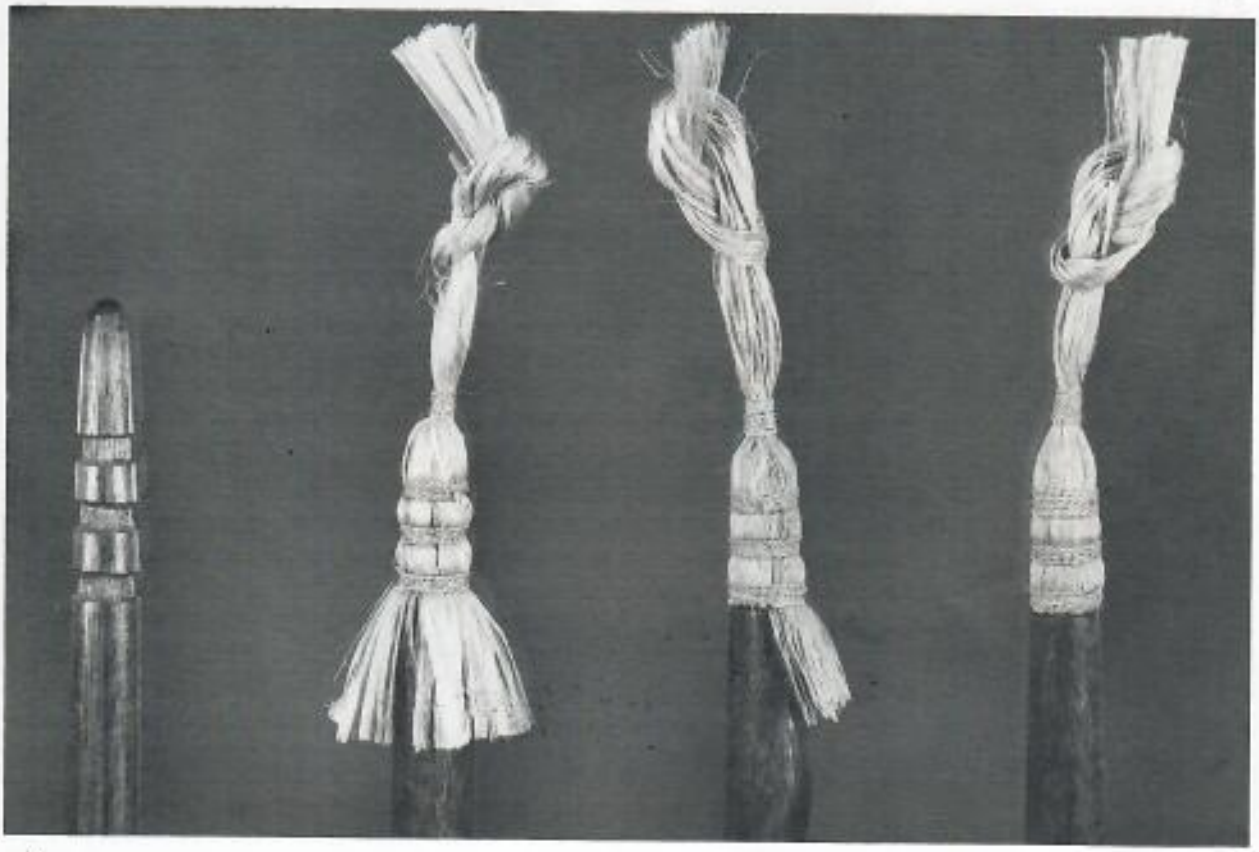
Hookmaking was a fine art in Hawai'i. Hook shapes and styles were specially designed for specific kinds of fish and fishing areas.

Hooks were shaped from bone, wood, and turtle shell, and filed with sea urchin spines, coral abraders, and shark skin rasps. Each hook represented a large investment of time and was highly valued. Hook shape and size were dictated by the swimming and eating habits of the animal to be caught. *Ulua* hooks, left, are recurved for the hard mouthed fish; fast swimming *aku*, skipjack tuna, took trolled lures, below. Octopus were attracted by shiny cowrey shells, bottom, and then hooked by hand line.

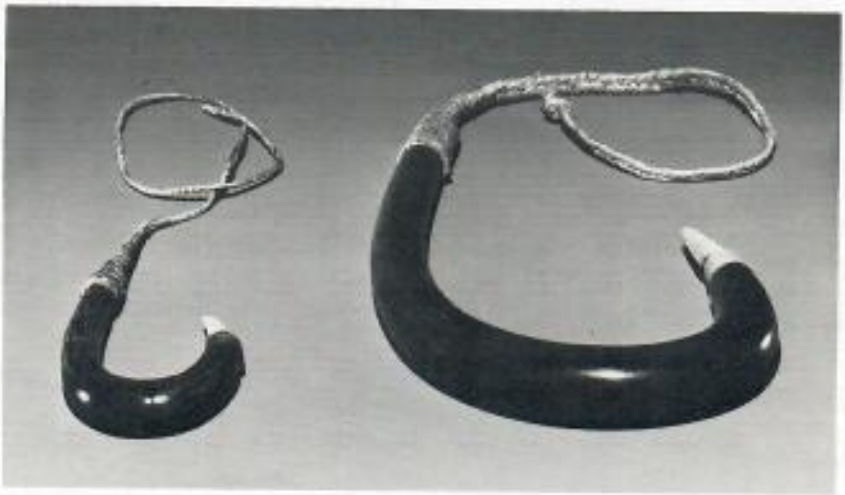


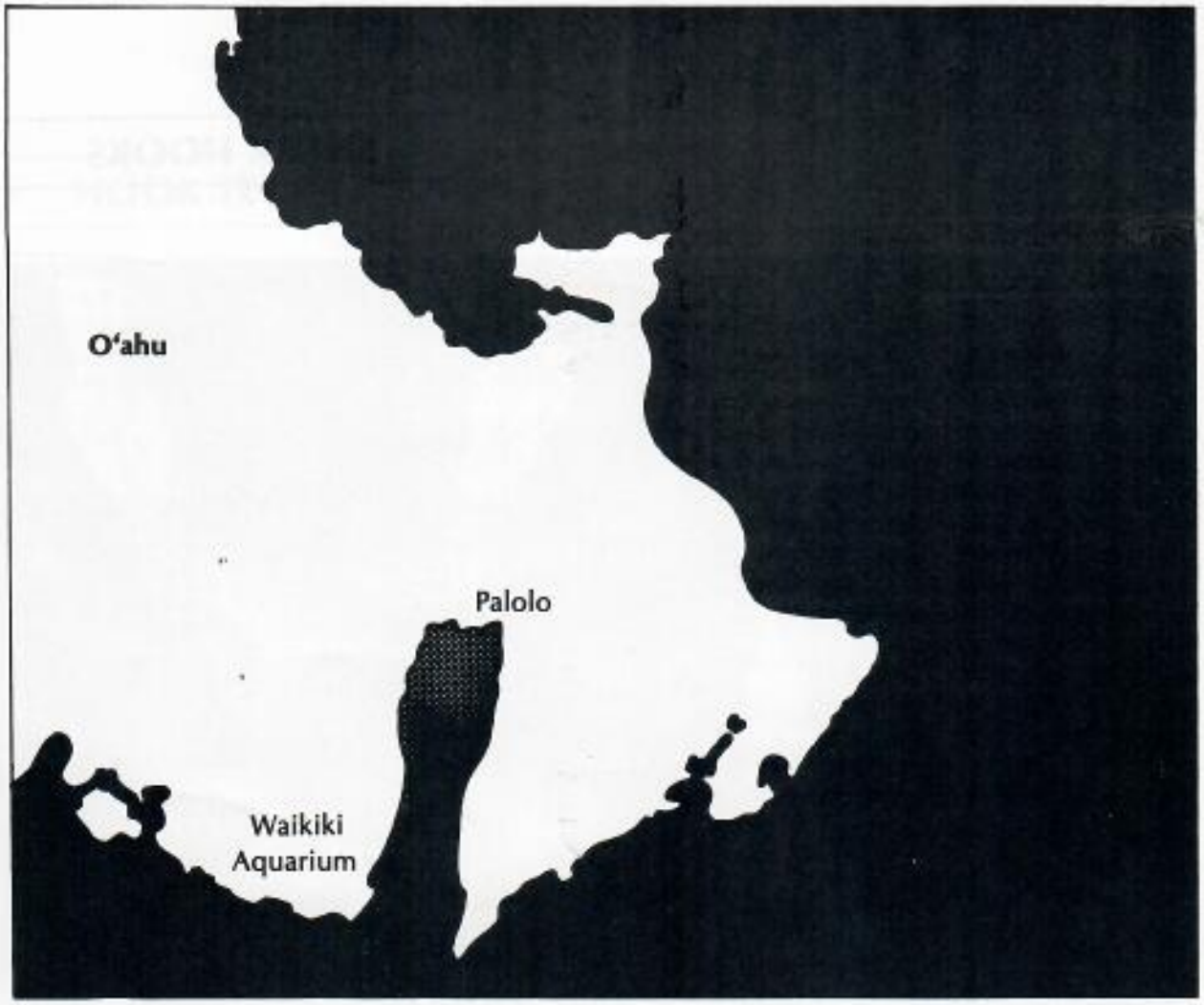


SHARK HOOKS



Sharks ( ) were a vital part of Hawaiian culture. Certain species had religious significance and were also central figures in Hawaiian folklore. Other species were actively sought for their teeth and skin. Large wooden hooks called *Kiholo* were tipped with bone. The heavy fishing line was tightly and intricately secured to the hook. Illustrated above are the steps in shark hook construction, with emphasis on the complicated "snood" lashing which holds the line on the hook.





LAND TENURE

Wise management of the resources of land and sea assured survival for the Hawaiian people.

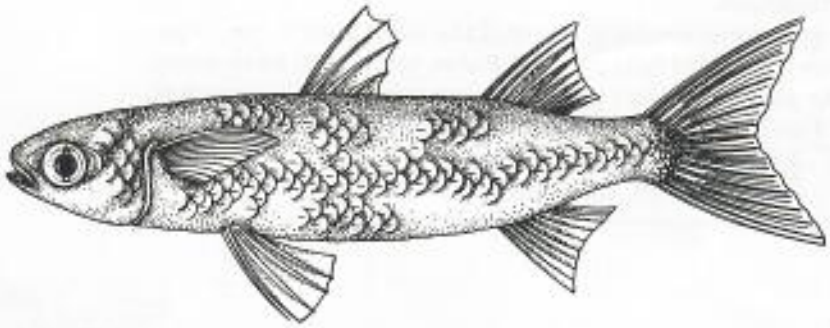
Land divisions were controlled by chiefs *(ali'i)* who were advised by specialists in farming and fishing. This advice stimulated complex regulations *(kapu)* which were enforced by royal agents *(konohiki)*.

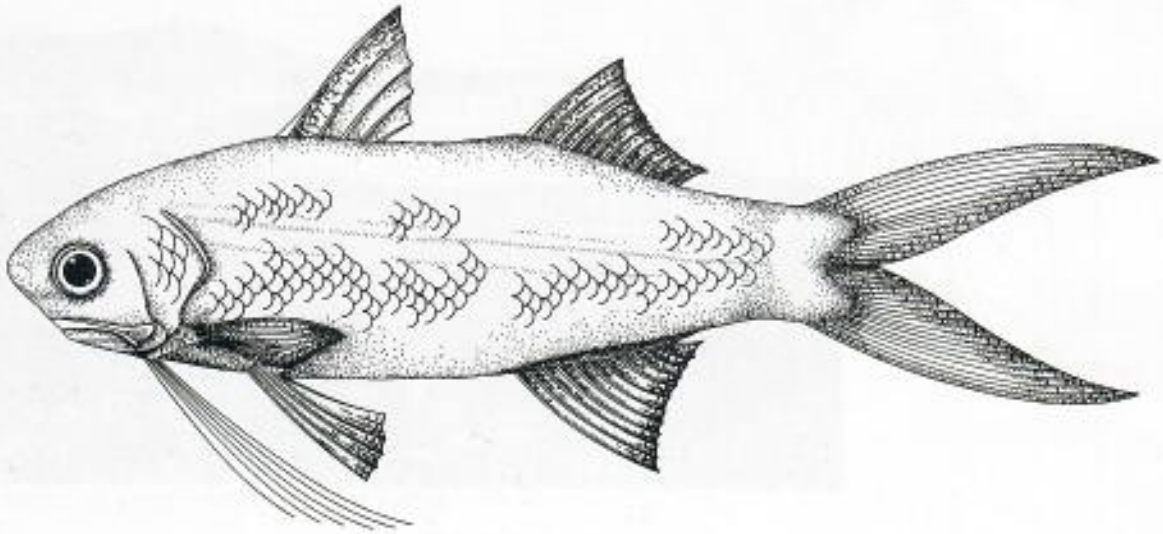
This land management extended into the sea, and fisheries were regulated as well as agriculture. Such "*konohiki* fishing rights" have been recognized and upheld by the U.S. Supreme Court.

The people paid taxes seasonally to the *ali'i*. Payment was often in the form of pigs and other valuable items which were presented at a stone boundary marker. *Ahupua'a* ("altars for pigs") is the term for major land divisions in Hawai'i.

FISH PONDS

Hawaiians constructed various types of fish ponds in which to keep and raise food fish. This aquatic farming was probably unique among Polynesian cultures. In this way, Hawaiians were able to stockpile live food for times of need and to provide an abundance of delicacies for royalty. Mullet ( ), awa ( ), and *moi* ( ) were the fish most commonly kept in these ponds after being netted in nearshore waters.



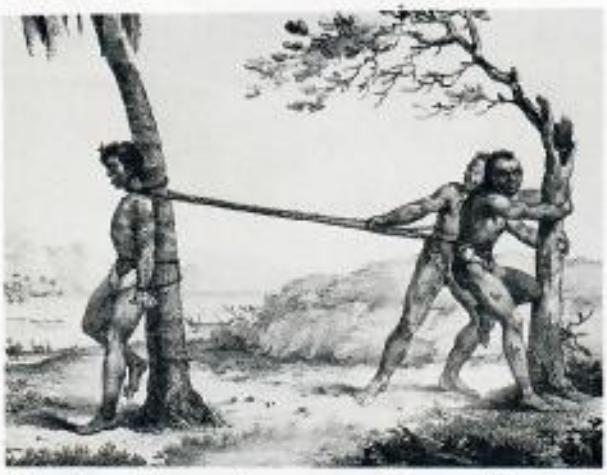


The *makaha*, a sophisticated sluice gate, kept the fish in these ponds from escaping while also protecting them from predators. The *makaha* also provided good water circulation.

Structures similar to the *makaha* were used in the irrigation systems of *taro* patches. Fishes tolerant of fresh water, like gobies *('o'opu)* ( ), were raised in these patches.

Fish pond construction was influenced both by methods of agriculture and fish trapping.

FISHERY MANAGEMENT

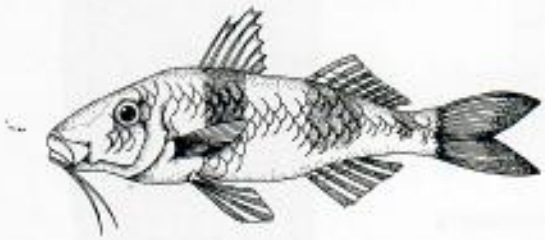


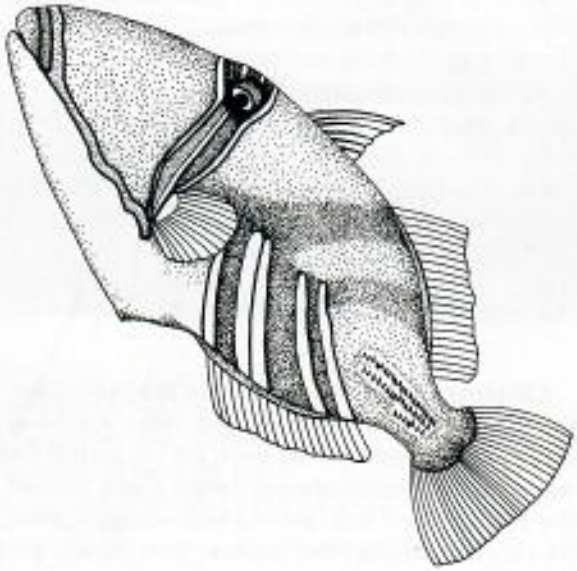
"Maniere d'etrangler uncoupable aux iles Sandwich," Jacques Arago
1819

Conservation of fishing resources was vital to the survival of the Hawaiian people. Over-fishing by one generation could cause starvation in the next. Complex and rigid systems of regulations *(kapu)* were developed based on experience and observations. Some modern scientists feel that the Hawaiians knew more about the life histories of Hawaiian fish than we know now.

Violating a State fishing regulation today may cost the offender $50.00; in old Hawai'i the cost was sometimes execution.

PIGS OF LAND AND SEA





Pigs were an important source of food in Hawai'i. They were also used for payment of taxes and for religious rites. The fine white flesh of pigs was used for religious offerings. Fishes with fine quality flesh could be substituted for pork. Favored species were the reddish goatfish, *kumu*, *weke*, and *moano* (above). Such fish were forbidden as food for women.

Certain fishes were considered to have characteristics of pigs. The *humuhumunukunukuapua'a* (right) roots in the sand for food and makes piglike grunts when handled. Its name, "triggerfish with the snout of a pig", reflects these habits.

GODS OF LAND AND SEA

Hawaiian religion was elaborate and complex, and it pervaded daily life. Land and sea were ruled by many gods and spirits who possessed a multitude of forms and personalities.

Lono is one of four major gods, and he exemplifies the integration of ocean and earth in Hawaiian religion. *Lono* was an important force in agriculture and annual offerings were made to him at the tax-paying harvest time. The long stick of *Lono* (capped by an image similar to that on the right) preceded this annual religious procession. This tall staff also bore a cross-piece with a square of white *kapa*. The symbol was remarkably suggestive of the sail of a square-rigged ship. The processional staff was also decorated with a booby skin, because one of *Lono's* living, organic forms is the great oceanic seabird, the booby (*Sula* sp.). It nests on land but feeds on the high seas for months at a time.

Offerings of great variety were made to *Lono*. These were placed in canoes and pushed to sea from Kealakekua Bay. *Lono* was believed to have landed here on his arrival from the south. By an extraordinary coincidence, James Cook arrived here at the time of the *Lono* festival in a "giant white-winged canoe." He was judged to be *Lono* returning from the sea; thus, he was greatly received by the Hawaiians.

KU'ULA

THE FISHING GOD OF HAWAI'I

Ku'ula was a master fisherman who had a wonderful power over all of the fish of the sea. He was the first Hawaiian to build a sacred rocky platform near the fishing ground to assure good fishing, and was the first to build a fish pond.

Ku'ula supplied the king with an abundance of delicious fish. But a large eel ( ) began to menace his pond and *Ku'ula* was forced to kill it. This eel was the *'aumakua* of another man who was greatly angered, so he tricked the king into burning *Ku'ula* and his wife in their home.

Before his death *Ku'ula* entrusted his son with the secrets and charms to ensure good fishing. Chief among these was a stone for which the great fisherman had been named. The son of *Ku'ula* travelled throughout the Islands building rocky platforms *(ko'a)* dedicated to fishing. In each he erected a *ku'ula* stone, and he instructed the people of the region to present to it the first two fish of their catch.

Ko'a with sacred *ku'ula*, still exist today in locales as varied as the peaks of *Nihoa*, the rocky points of *Kaho'olawe*, and the shores of *Moloka'i* and *Hawai'i*. To many Hawaiians, *Ku'ula* still assures good fishing.

FISHING SHRINE

Stone fishing shrines were erected at many shoreside locations near important fishing grounds. The floor was paved with water-worn stones and bleached coral. The Hawaiian word for coral *(ko'a)* is also the name of this type of shrine. A special upright stone *(ku'ula)* embodied the spirit of the fishing deity. Offerings were made to ensure good catches and to express thanks for success. Fish from the catch were presented at these shrines.

Offerings to fish-stones *(ku'ula)* were sacred. To remove these offerings before the god had taken the essence was to risk deep misfortune.

SHARKS AND RELIGION

Sharks were important forces in Hawaiian religion. A clear distinction was made between beneficient and malevolent species.

Hawaiian families often had a personal god or guardian spirit, called *'aumakua*, who took the form of an animal. Owls, eels, and even plants could embody such a spirit, but very often a shark was *'aumakua*. As such, it was looked to for protection and guidance. Catches of fish were shared with it. Such benevolent sharks could calm the waves and locate fish.

Dangerous, man-eating sharks were also featured in Hawaiian religion. Such sharks would take the form of humans who walked on land and lured victims into the sea.

The shark image illustrated above is an 8' stone from the Kohala region of Hawai'i which is now on exhibit at the Bishop Museum. Legend says that the stone was once a shark who devoured young girls. Fishermen attacked the shark with spears and wounded it mortally. Later, on shore, the men found a stranger dying of spear wounds. The shark-man then turned into a large stone. Similar stones are found throughout the Islands. Some were considered to be *Ka'moho'ali'i*, the "many-bodied brother of Pele", and offerings were made to them.

Hawaiians with shark *'aumakua* often identified closely with the animal:

"About 1913, Lorrin A. Thurston mentioned to me that he had seen a woman tattooed with a row of dots around the ankle as a charm against sharks. Back of this practice was the story about a woman whose ankle was bitten by a shark, which was her guardian god *('aumakua)*. Once, by mistake, he seized her ankle while she was swimming. When she cried out his name he let her go saying, 'I will not make that mistake again, for I see the mark on your ankle.'"

Kenneth P. Emory, "Hawaiian Tattooing"
Occasional Papers of the Bishop Museum, 1946.

MAUI

FISHER OF ISLANDS

There are many legends about the demi-god *Maui*: how he snared the sun and forced it to travel more slowly so his mother could dry her *kapa*; how he stole fire; and how he raised the sky so humans would have more room to walk upright.

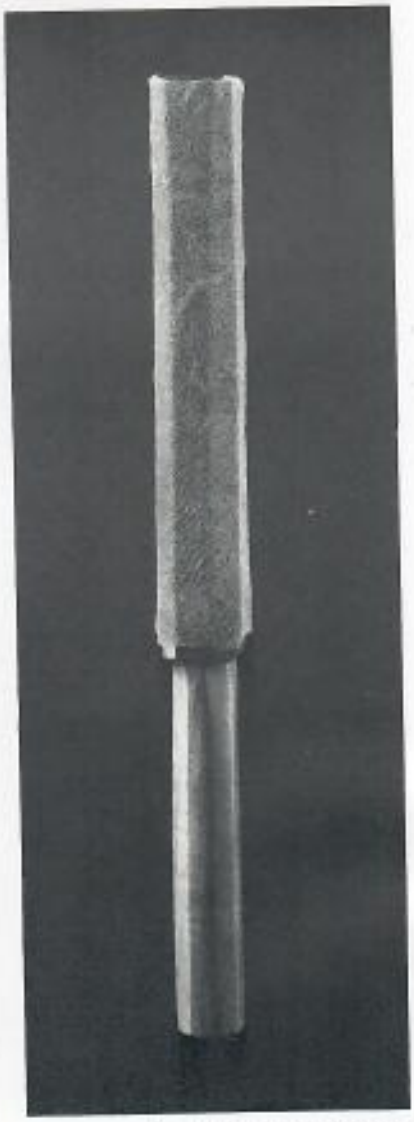
Maui also accomplished a major feat which required his fishing skill. In *Kumulipo* and other versions, it is told that *Maui* used a magic fishhook to grapple the islands out of the ocean. However, the islands are fragmented because his brothers ignored a god's command and turned to look at their catch too soon.

Maui's fishhook can still be seen in the night sky, although Westerners call the constellation, "Scorpio."

HAWAIIAN ARTS

Marine animals were important elements in Hawaiian arts and crafts for they provided both the motifs and raw materials for drums, jewelry, rock drawings, knives, weapons, and clothing decorations. A few examples are shown here.

Hawaiian craftsmen worked without benefit of metal tools. Instead they used shark teeth, coral files, shell drills, wood, stone, and much skill and patience. Their artfully contrived objects also served important functions. What the Hawaiians probably viewed as tools or everyday objects, we now view as works of art.

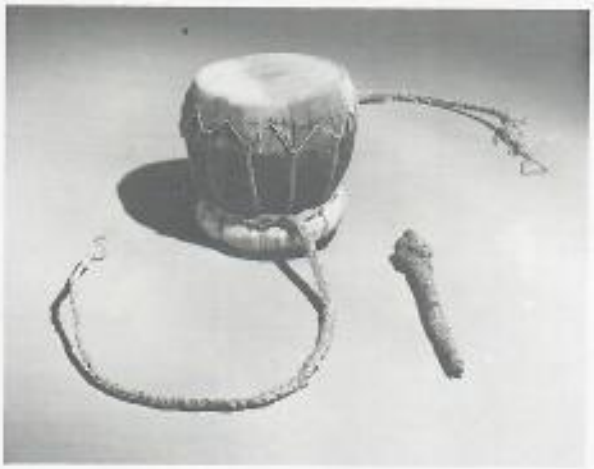


Shark Skin Sandpaper

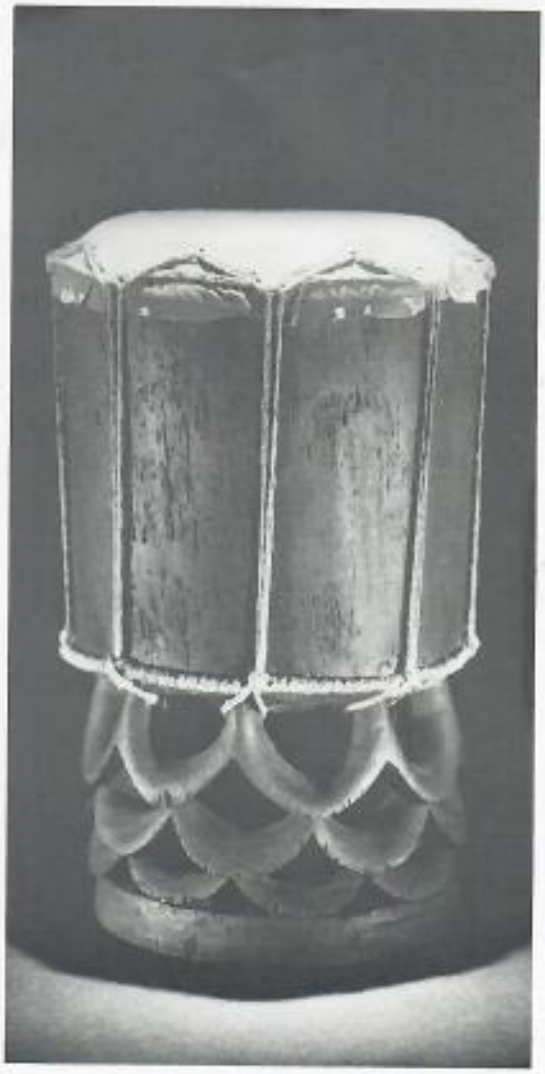
The shark's strong skin was used as an abrasive to shape tools, hooks, and canoes.

DRUMS FROM FISH

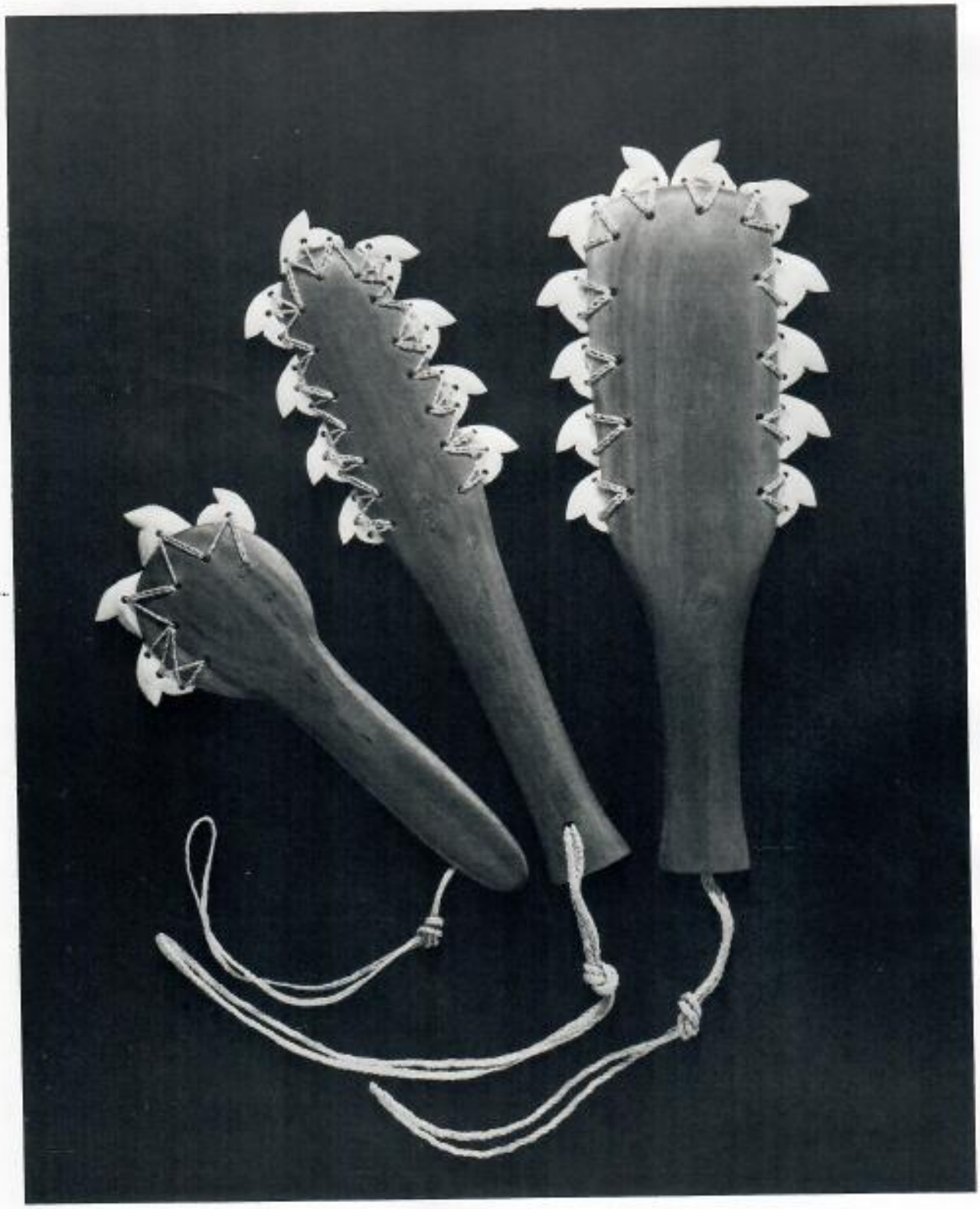
The skin of sharks provided durable drum heads for large drums while the thinner skin of the unicorn surgeonfish *(Kala)*( ) was used on smaller coconut knee-drums.

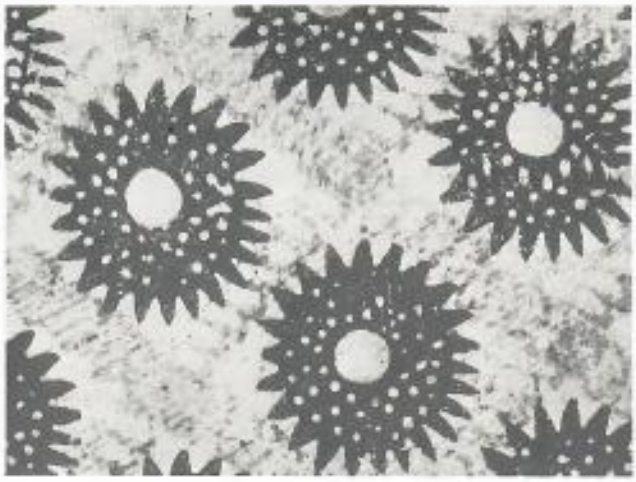


"Danse des hommes dans les iles Sandwich,"
Louis Choris 1816

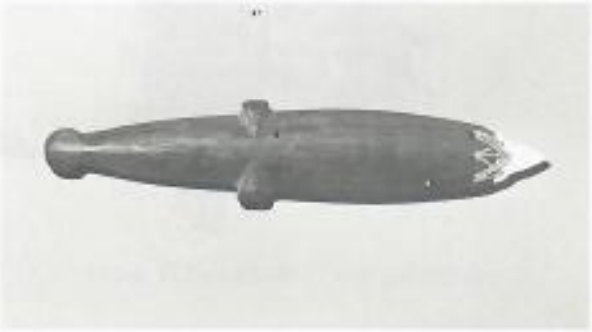


SHARK TOOTH WEAPONS



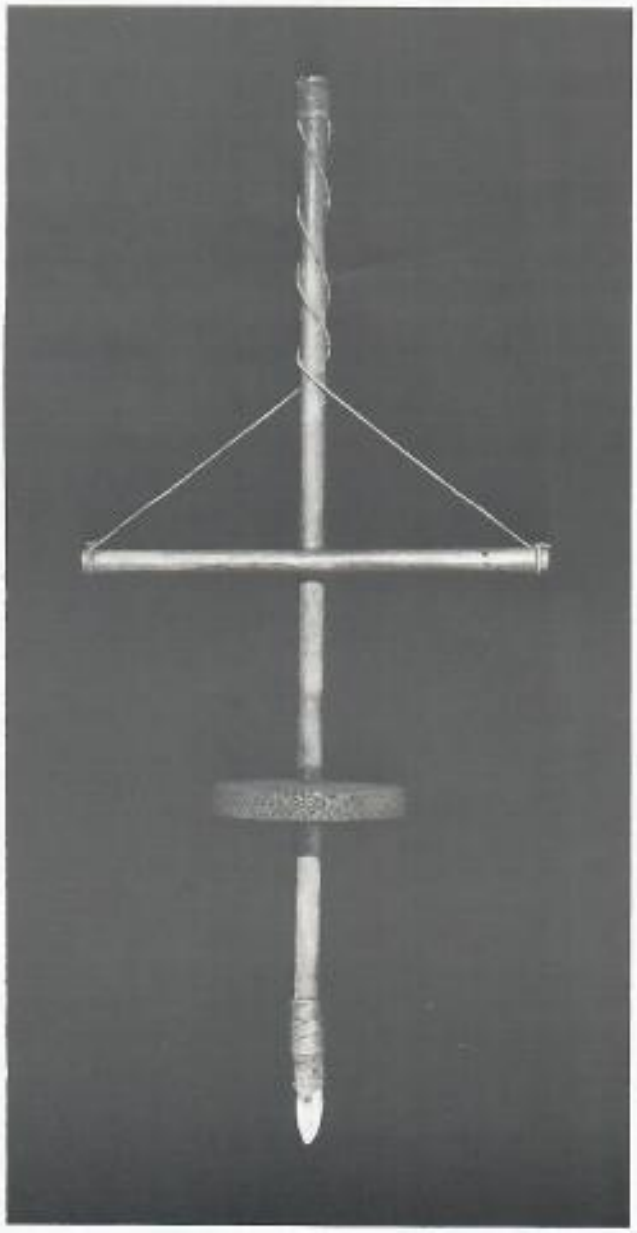


Hawaiian Tapa
Sea Urchin Motif
Bishop Museum Collection



Shark Tooth Knife

Sea Urchin File



Pump Drill with Shell Tip.

LIMU: HAWAIIAN SEAWEEDS

Limu, as the Hawaiians called coastal algae or seaweeds, provided a rich source of food and medicines.

Hawaiians ate more different species of *limu* than any other people in the world and at least ten times as many species as other Polynesians.

One reason for this high consumption was the *kapu* system which forbade some people from eating certain classes of food. Women were particularly affected, for they could not eat pork, bananas, turtle, octopus, coconut, and such fish as *kumu* and *ulua*. They turned to shell fish and seaweeds for food and became skilled at gathering them in nearshore areas.

Seaweeds were eaten fresh, blended with other foods, or used as spices. *Limu*-eating fish, such as *manini* ( ) and *palani* ( ), were eaten with the *limu*-filled stomach as a sauce. Other *limu* were used as medicine to treat miscarriage, mouth sores, and to make poultices. Some species had important ceremonial functions.

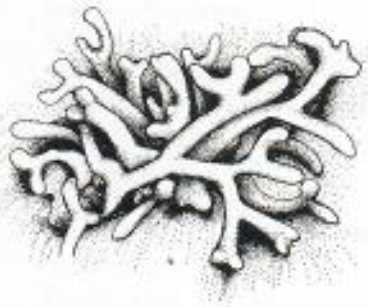
Hawaiian residents still harvest fresh *limu* for food. Modern food processors also use seaweed derivatives as additives to thicken and smooth liquids.

Edible Limu

The Hawaiians relished more than 70 species of *limu*. Several varieties of these savory sea vegetables are still regularly featured in today's markets. Some examples of important edible algae are shown here. Look for the beautiful living forms when you swim or snorkel.

Limu can be eaten alone or added to chopped fish, urchin roe, and other dishes. Some species are used as spices and thickeners.

Hawaiians living near the coast used *limu* as a prime exchange item for upland products such as *kapa* fibers, *taro*, and *olona* rope.



Limu Wawae'iole (Codium edule)

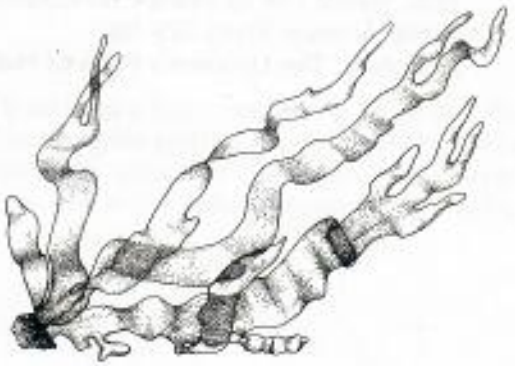
Limu Lipoa (Dictyopteris plagiogramma)

Ceremonial Limu

Certain *limu* were important to the Hawaiians for other uses than food.

Limu kala (Sargassum echinocarpum) could symbolize forgiveness and was used in the Hawaiian family ritual called *ho'o ponopono*. The goal of this family gathering was to renew peace and forgiveness within the *'ohana*. Members would gather in a circle to air problems and grievances. Young leaves of *limu kala* were presented and eaten at the end of the ceremony.

Limu palahalaha (Ulva fasciata), the sea lettuce, was used in ceremonial hulas. It also had special significance to those whose *'aumakua* was the shark. Legend relates that an early ancestor of the shark was wrapped in its leaves and put into the sea in this garment. This *limu* is *kapu* to those whom the shark god protects.



REFERENCES & SUGGESTED READINGS

Abbott, I.A. and E.H. Williamson
1974. Limu: an Ethnobotanical Study of Some Edible Hawaiian Seaweeds. Pacific Tropical Botanical Garden, Kauai. 20 pp.

Beckwith, Martha, ed.
1972. A Hawaiian Creation Chant (The Kumulipo)
Honolulu: The University Press of Hawaii.

Buck, Peter H.
1964. Arts and Crafts of Hawaii, Vols. 1-13.
Honolulu: Bishop Museum Press.

Fortner, Heather J.
1978. The Limu Eater, A cookbook of Hawaiian Seaweed.
Sea Grant Miscellaneous Report, Honolulu. 107 pp.

Hobson, Edmund S. and E.H. Chave
1972. Hawaiian Reef Animals.
The University Press of Hawaii. 135 pp.

Malo, David. (translated by Dr. N.B. Emerson, 1898)
1951. Hawaiian Antiquities (Moolelo Hawaii.)
Honolulu: Bishop Museum Press. 278 pp.

Pukui, Mary Kawena et al.
1972. Nana I ke Kumu (Look to the Source.)
Honolulu: Hui Hanai, An Auxiliary of the Queen Lili'uokalani Children's Center. Vols. 1 and 2.

Titcomb, Margaret
1978. Native Use of Marine Invertebrates in Old Hawaii.
Pacific Science 31(4): 325-386.
Honolulu: The University Press of Hawaii.

ACKNOWLEDGEMENTS

This book is based on an exhibit which opened at the Waikiki Aquarium in February 1981. Primary support was provided by a grant from the National Endowment for the Humanities. Special thanks are also due to the Friends of the Waikiki Aquarium and the Bernice P. Bishop Museum. The exhibit and the accompanying book are the result of the combined talents of many people who have worked together in the Hawaiian spirit of 'ohana to research, design and build the displays, and to redecorate and light the museum space.

Isabella Abbott
Nobu Arakawa
Stanley Arakawa
Frances Carter
Edward Creutz
Lynn Davis
Dial Electric
Richard Ellis
Greg Enos
Ann Fielding
Heather Fortner
Steve Gold
Byron Horswill
Hui Kokua no na Mea Kuna Maoli'o Hawaii
Kuaika Jendrusch
Rubellite K. Johnson
Junior League of Honolulu
Adrienne Kaeppler
Marion Kelly
David Kemble
Patrick Kirch
Will Kyselka
Linda Levins
Leslie Lyum
Martin and MacArthur
Leslie Matsuura
Greg Matney
Kekai Maunalei
Min Plastics
Donald Mitchell
Kiyoshi Miyasato
Mary Morioka
Rick Moss
Ruth Naftel
Other Type
Pacific Frames
Donna Pang
Ben Patnoi
Charles Pauole
Rite-Way Electric
Roger Rose
Herbert Sartorius and Family
Joel Sims
Irene and Roger Schulte
Margaret Titcomb
Waikiki Aquarium Staff
Farley Watanabe
Robert Weber

"Hawaiians and the Sea" is made possible by funding from the National Endowment for the Humanities and the Friends of the Waikiki Aquarium, and with the cooperation of the Bernice P. Bishop Museum. Our sincere aloha to all who helped us.

Hisao Goto - Case Design and Construction
Toni Maiava - Artifact Facsimiles and Models
John McLaughlin - Design and Graphics
Leighton Taylor - Exhibit Coordinator

Historical Photographs

Many of the photographs in this booklet are from the Bishop Museum Photograph Collection. The Collection offers scientific and historical views of Hawai'i and the Pacific Islands. The public is invited to view this collection every Tuesday, Wednesday, and Thursday from 1:00 to 4:00 at the Bishop Museum. Other photos were produced by Ben Patnoi.

Hawaiians And The Sea

Report 72-1

BPM - Honuapo ?

Kelly p. 53 see 54-55 (1868)

SALVAGE ARCHAEOLOGY AT WAILAU-NINOLE, KA'U, ISLAND OF HAWAII

By

William M. Barrera, Jr., and Robert Hommon

Prepared for:
Ka'u Historical Society
and funded by C. Brewer & Co., Ltd.

February 1972

Department of Anthropology
BERNICE P. BISHOP MUSEUM
Honolulu, Hawaii

PREFACE

This report covers the results of two phases of an archaeological and historical investigation in the *ahupua'a* of Wailau-Ninole in the district of Ka'u on the Island of Hawaii in 1970 and 1971. The work was undertaken for the Ka'u Historical Society for the purpose of locating and salvaging sites of archaeological or historical interest within the boundaries of that area.

The first phase of the work involved an archaeological site survey from Highway 11 to the coast and was conducted by Robert Hommon, with a crew of six assistants, from March 23 to April 8, 1970. The second phase, from June 22 to July 23, 1971, consisted of excavations in sites selected for further investigation on the basis of Hommon's survey report (Hommon, n.d.), and was directed by William Barrera, with the assistance of a crew of three paid workers and two volunteers.

Because the Ninole portion of the old Alanui Aupuni (Government Road) had been destroyed and couldn't be located by the archaeological team, the problem of determining its former existence and route was given to Marion Kelly. Her brief report is appended.

On completion of the 1971 excavations, the crew spent a few days excavating a burial platform at Honuapo, about 4 miles southwest down the coast. The report on that excavation will be included in a final report on that area at a future date.

We would like to acknowledge the support and assistance of Mr. Edward Crook of Administration, Inc., Larry Garrett of Swinerton Hawaii Venture, Violet Hansen, Bishop Museum Associate, and Mr. Roy Replogle of Hutchinson Sugar Co. We are also grateful to our field-crew members in both phases--Gilbert Barba, Clement Hirae, Don Lambert, Neal Oshima, Jarett Pesano, Calvin Ponce, Ginny Replogle, Cathy Vernon, and Roy Wakimura. Thanks also go to our two volunteer assistants, Thelma Block and Kenji Hattori. We want to express our appreciation to personnel at the Museum--Freddie Harby sorted the midden materials and catalogued the artifacts; Neal Crozier drafted and lettered many of the maps and drew the artifact illustrations; and Neal Oshima assisted with the photographic work. We want also to thank Stell Newman, State Archaeologist, for aiding in the identification of the bottles recovered from the excavations.

William M. Barrera, Jr.

Robert Hommon

March 1972

CONTENTS

ILLUSTRATIONS

GLOSSARY

a'a	clinker lava, with rough, sharp points and edges
ahupua'a	land division usually extending from the uplands to the sea
'ili'ili	pebble, small stone
konane	ancient Hawaiian game resembling checkers
makai	toward the sea
mauka	toward the uplands
Pahala Ash	a widespread deposit of volcanic ash on the Island of Hawaii
pahoehoe	smooth, unbroken type of lava, sometimes twisted or ropey in appearance
totora	bullrush (*Scirpus validus*)
wahi pana	place about which there is a story

I. INTRODUCTION

The district of Ka'u is situated on the S coast of the Island of Hawaii (Fig. 1). Its leeward position, which limits rainfall, and the active nature of the Mauna Loa and Kilauea volcanoes, which have recently covered large tracts with thin sheets of not-yet-decomposed lava, keep much of Ka'u a desert. Annual rainfall in the project area ranges between 20 and 40 in. (Coulter 1931:29). There are no perennial streams in the district; the only streams that exist flow for only a few hours after a heavy rainfall. "Within the forest belt they may continue to flow for a few days after a protracted rain, when the ground is thoroughly soaked, but it is very rare, indeed, that their waters reach the sea" (Stearns and Clark, 1930:174).

All of the deposits in the district are permeable, "...the lavas so extremely permeable as to offer only a little resistance to the downward percolation of ground water and practically no resistance to its horizontal movement" (Stearns and Clark, 1930:175).

Our area of investigation--the seaward portion of the land division of Wailau--is a relatively flat plain (Figs. 2 and 3) bounded on the E and W by relatively recent lava flows. The inland boundary of the overall survey area is delimited by Highway 11, and the inland boundary of the area in which sites were excavated is delimited by a cliff at about 15-meter (50-ft) elevation. The project extends *makai* to the ocean (Fig. 1). The area is located in what Ripperton and Hosaka referred to as Vegetation Zone B:

> The vegetation is of the lowland shrub type, and plant coverage is generally good except on the steeper slopes and ridges. The shrubs are more numerous and vigorous, and the annuals are longer-lived than in Zone A...The plant community is unstable and subject to an evolutionary change. Lantana and cactus have spread over vast areas. It is believed that koa haole might after a long period supplant lantana if allowed to compete without grazing; under grazing the trend is greatly retarded (Ripperton and Hosaka, 1942:24).

It would seem that their prediction was well founded, for at the present time the distribution of *koa haole (Leucaena glauca)* is about equal to that of the lantana *(Lantana camara)*. These two pests share the honor about equally with Christmasberry, or *wilelaike (Schinus terebinthifolius)*, for the dubious distinction of having hampered the survey the most--thick growths of these plants are everywhere, to the almost total exclusion of any others.

The vegetation is rooted in what the Detailed Land Classification of Hawaii Island refers to as D-290 type deposits, consisting of very shallow, moderately fine-textured, dark-brown materials, the parent material of

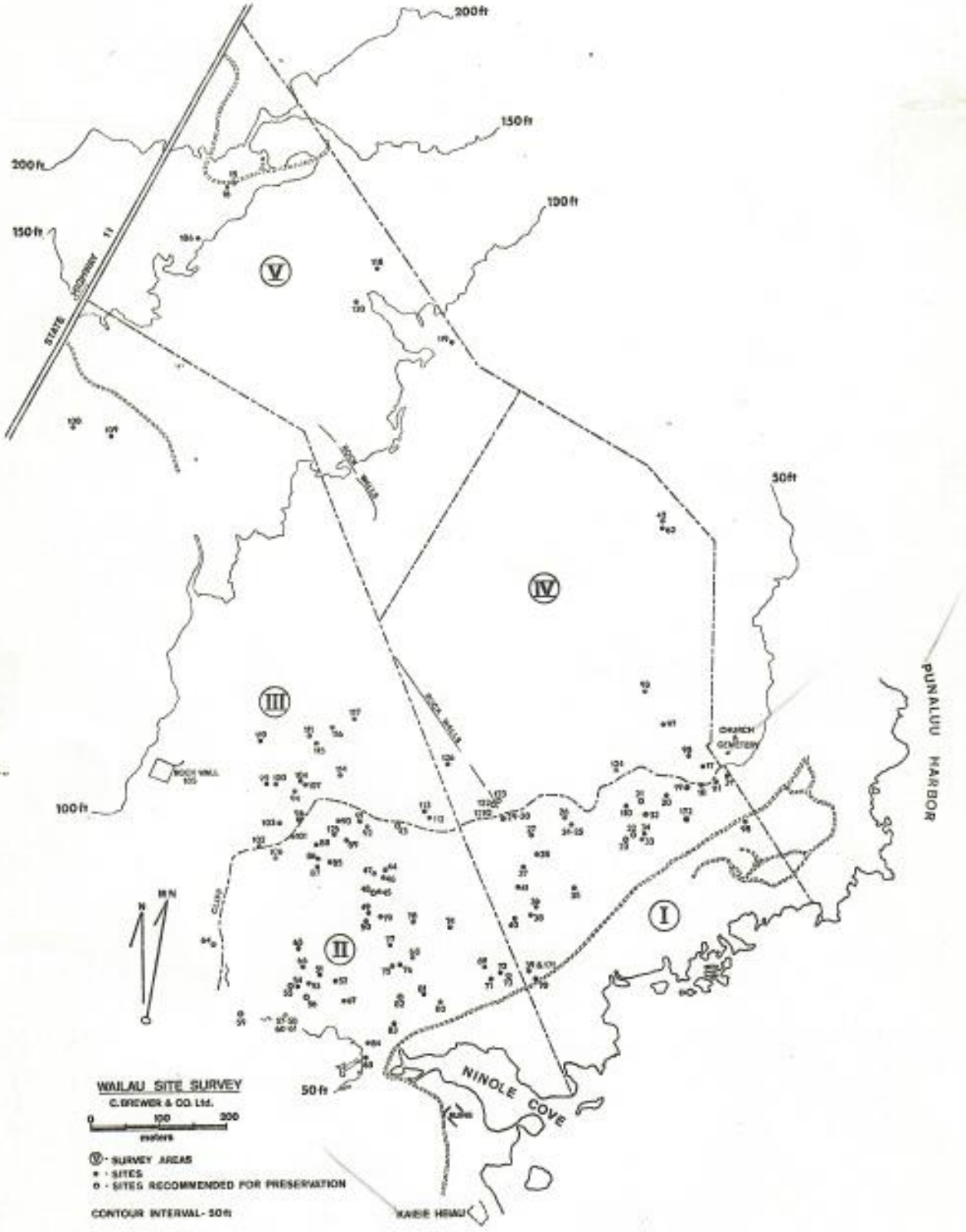


Fig. 1. PLAN OF GENERAL AREA OF WAILAU SITE SURVEY.

Fig. 2. VIEW FROM S END OF SURVEY AREA, LOOKING N ACROSS UPPER END OF NINOLE COVE.

Fig. 3. VIEW LOOKING ACROSS SURVEY AREA, SHOWING GRASS-COVERED ROCK WALL IN LOW CENTER.

which is volcanic ash and pahoehoe lava. These slightly stony and well-drained deposits are very poorly suited for machine tillability. The slope varies between 0 and 35 percent but is generally under 15 percent (Baker et al., 1965:29).

On the E end of the investigation area is the black-sand beach at Punaluu, on the W is Ninole Cove (Fig. 4), at which is located one of the largest springs in the district; its total discharge above the low-tide mark is approximately 25 sec-ft. "Along the adjacent shore there is reported to be considerable fresh water coming up from the floor of the sea a few feet below high tide. At some places...where the discharge of water is most concentrated, it is seen issuing from lava tubes" (Stearns and Clark, 1930:176). A limited-area but thick stand of *totora* reeds is found at Ninole Cove. Between the cove and the Punaluu beach the waves break on bare pahoehoe lava.

II. ARCHAEOLOGICAL SITES RECORDED IN INITIAL SURVEY

One hundred and eleven archaeological sites were found and recorded in 1970 in the five survey areas into which the project area was divided. These sites included 216 archaeological features (see Hommon, 1970:46-48). Appendix A is a summary of the surveyed sites and their constituent features.

Fig. 4. VIEW ACROSS NINOLE COVE TO THE OCEAN.

Appendix O. ALANUI AUPUNI AT NINOLE

by

Marion Kelly

A comparison of the 1852 map (Fig. 19) with the 1907 map (Fig. 20) of the coastline at Ninole indicates that the old Alanui Aupuni probably followed a route seaward of Ninole Pond after it left the high aa lava that is S of Ninole Pond. After coming off the aa lava, the old road took a northeasterly direction across a small river* at the southern edge of Ninole Pond, along sand dunes on the pahoehoe flats at the eastern end (*makai*) of the pond, then a northern turn around the back (*mauka*) of a smaller pond (see Fig. 19), and finally off in a northeasterly direction toward Koloa beach, which is the home of the famous legendary multiplying stones ('Ili'ili-o-Koloa) that can still be seen today (Fig. 21).**

---

* This river is mentioned in the surveyor's notes, which give the measurements for Grant No. 821 to Holoua and are dated July 19, 1852. The surveyor's notes read:

> Beginning at mouth of stream at seashore, 1 ch (chain) makai of road, run N. 31 1/4 E. 13.74 ch, 906.9 ft along sea shore; N 11 E, 4.86 ch, 320.8 ft to S corner of Kekaula's; N 42 W, 16.50 ch, 1089.0 ft along boundary of Kekaula's to pile of stones in aa at makai corner of Kaui's; then S 48 1/4 W, 23.48 ch, 1549.7 ft along boundary of Kaui's to aa; S 57 1/2 E, 24.50 ch, 1617.0 ft along inside aa to place of beginning. July 19, 1852, Area 42.65 acres (Kau Grant Book, p. 133).

The map in Fig. 19 was drawn by the surveyor from his notes.

The river was probably created by the outflow from Ninole Pond, which was and still is fed by the famous Ninole fresh-water springs.

** These stones appear today on what Rev. William Ellis described as a "short pebbly beach, called Koroa, the stones of which were reported to possess very singular properties, among others that of propagating their species" (Ellis, 1963:145).

Ellis also reported that he had been told by residents of the area that this was:

> ...a *wahi pana* (place famous) for supplying the black and white *konane* stone; and also the stones for making small adzes and hatchets, before they were acquainted with the use of iron; but particularly for supplying the stones of which the gods were made, that presided over most of the games of Hawaii. Some powers of discrimination, they told us, were necessary to discover the stones, which would answer to be deified. When selected, they were taken to the heiau, and there several ceremonies were performed over them.
>
> Afterwards, when dressed and taken to the place where the games were practised, if the party to whom they belonged were successful, their fame was established; but, if unsuccessful for several times together, they were either broken to pieces, or thrown contemptuously away. When

(continued, bottom, p. 54)

In an interview on January 31, 1972, Mr. William Meinecke, a long-time resident of Ka'u, stated that it was traditional knowledge that there had been a road *makai* of Ninole Pond and that it had disappeared in 1868 at the time of the volcanic and tsunami action in the area. He further stated that, as far as he knew, there had always been a Ninole spring (Fig. 22) at the place where the spring is presently located, and that there had always been a pond area just *makai* of the spring. However, he said there was once more land along the shoreline (Fig. 23). It was there that the old road came down off the aa lava flow onto the Ninole plain and along the coast. After the 1868 volcanic and tsunami disaster the road was gone and its disappearance has been laid to subsidence of the land.

If it can be presumed that the present Koloa beach is the same as that reported by Ellis in 1824, any subsidence would have been restricted only to the portion of the road *makai* of Ninole Pond. Dr. Gordon Macdonald confirmed (in a telephone interview) that he knows of no literature that describes any subsidence at Ninole; however, he also said that it is entirely possible that such action took place and would now be known only through traditional knowledge carried on by people living in the area.

From the evidence available at this late date, it would seem that there would be no need for subsidence to account for a change in the shoreline at this point, although it is still possible that subsidence occurred. The change described as having taken place in 1868 could have been entirely effected by tsunami action alone. If subsidence occurred, it would have been extremely restricted to the one area *makai* of Ninole Pond, and while such restriction would not be impossible, it would seem highly unlikely. It is more reasonable to assume that sand dunes did cover the pahoehoe flats *makai* of the pond and that tsunami wave action into and back out of Ninole Pond scoured the sand off the pahoehoe, taking with it the original road *makai* of the pond.

Brigham (1909:103-104) quotes a report by a passenger on board the schooner *Oddfellow*, which was cruising along the coast of Ka'u shortly after the disaster. Arriving at Punaluu on Monday, April 6, 1868, the passenger wrote:

** (continued from bottom, p. 51)

any were removed for the purpose of being transformed into gods, one of each sex was generally selected, and were always wrapped up very carefully together in a piece of cloth. After a certain time, a small stone would be found with them, which, when grown to the size of its parents, was taken to the heiau, and made afterwards to preside at the games (1963:145-146).

Ellis also reported that Koloa was a place of importance in time of war, as it furnished the best stones for the slingers. He described the stones, saying "The black ones appeared to be pieces of trap, or compact lava. The white ones were branches of white coral common to all the islands of the Pacific. The angles of both were worn away, and a considerable polish gaven [*sic.*], by the attrition occasioned by the continual rolling of the surf on the beach."

> Too rough to attempt a landing. The stone church and all other buildings near the sea gone. At Ninole but three houses were left. Smoke or steam is issuing from the hills back of Hilea. Came to anchor at Kaalualu at noon. The houses, wharf, etc., all gone here, and the rocks inland strewed with the wreck for a distance of six or eight hundred feet.

While the volcanic and landslide action was severe from Kahuku to Waiohinu (Fig. 24), Hilea, and beyond, the tsunami action that followed was even more disasterous in terms of destruction of houses and loss of life. Brigham's scoreboard for losses in Ka'u reads as follows (1909:118):

Houses destroyed by land-slide	10	Deaths	31
Houses destroyed by sea-wave	108	Deaths	46
Houses destroyed by earthquake	46	Deaths	0
Houses destroyed by lava-stream	37	Deaths	0
Totals	201		77

He also reported that only one life was lost in Puna by the tsunami and one in Hilo "...by a falling cliff" (1909:118).

Summary:

Evidence indicates that the old government road around the island (Alanui Aupuni) did traverse the area *makai* of the present Ninole Pond (refered to on C. Brewer map as Ninole cove).* In addition, it appears that this road was destroyed in the 1868 disaster, and that it was probably the tsunami that washed it away, although some subsidence may have occurred.

* A fishpond wall is shown in Fig. 23, in the position in which it was previous to the 1954 tsunami which destroyed it. The 1907 map (Fig. 20) also shows a fishpond wall seaward of the smaller of the two ponds. There is no evidence of this wall today.

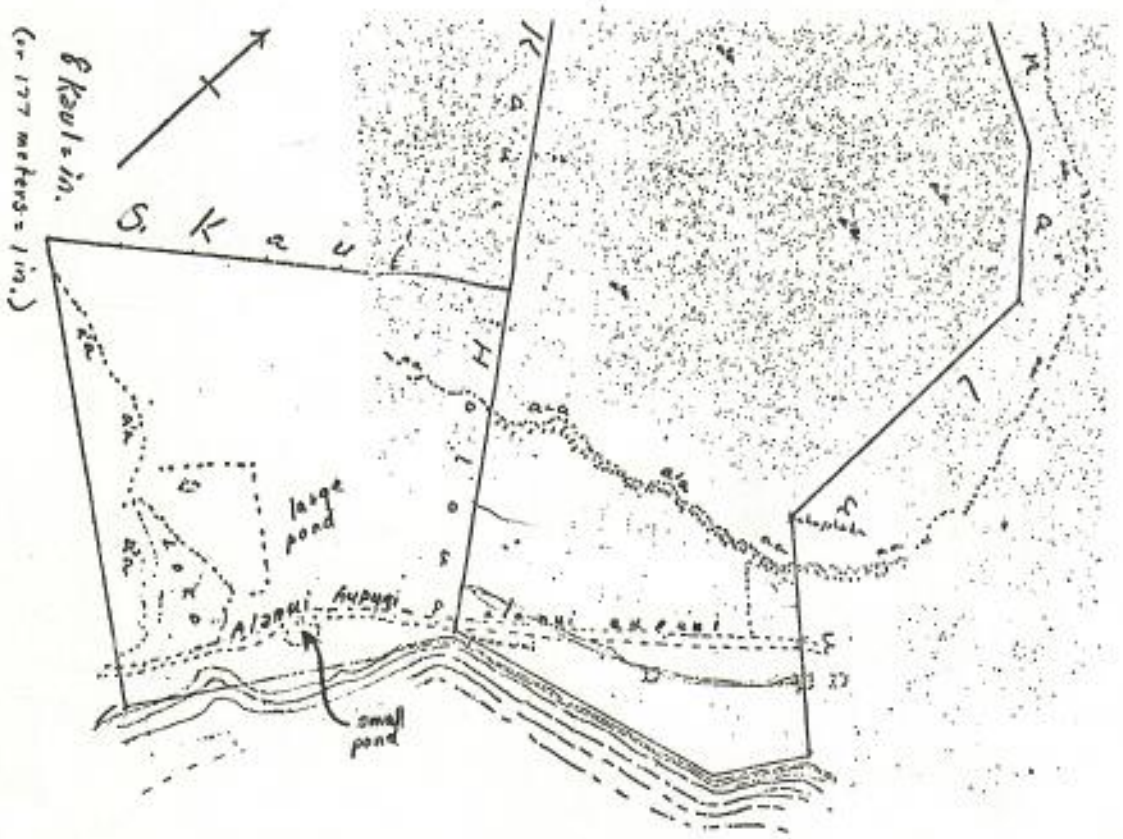


Fig. 19. MAP OF ROYAL PATENT GRANTS NO. 821 TO HOLOUA AND 828 TO KEKAULA, SHOWING COASTLINE AND ALANUI AUPUNI AS SURVEYED JULY 19, 1852.

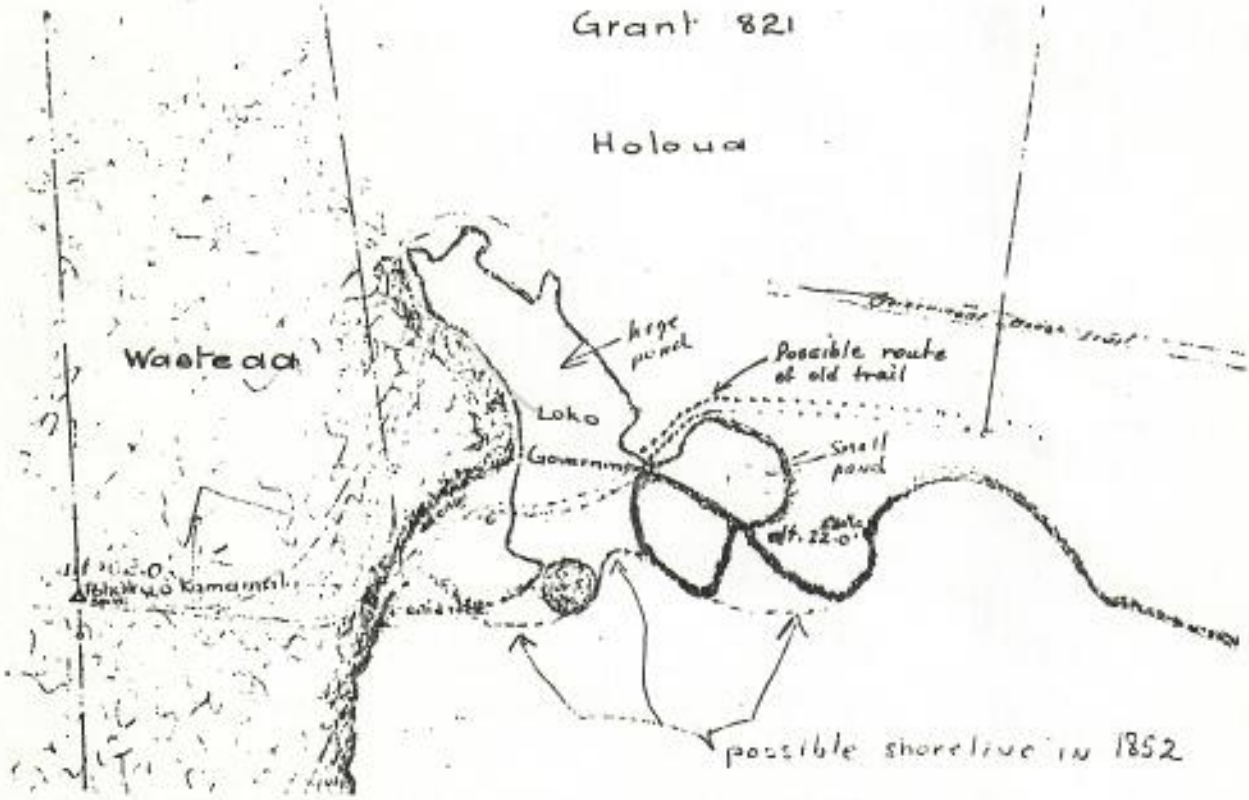


Fig. 20. MAP OF NINOLE AND WAILAU REMNANTS, KA'U, HAWAII (REG. NO. 2395) AS SURVEYED BY GEO. F. WRIGHT, MARCH, 1907.

Fig. 21. WILLIAM MEINECKE AND FRIENDS EXAMINING 'ILI'ILI-O-KOLOA, MULTIPLYING STONES OF KOLOA, AUGUST 21, 1954.

Fig. 22. WILLIAM MEINECKE AND VISITORS BY NINOLE FRESH-WATER SPRING WITH *HONOHONO* GRASS, AUGUST 21, 1954.

a. August 21, 1954

b. March 14, 1972

Fig. 23. LOOKING *MAKAI* FROM TOP OF A'A FLOW TOWARD EASTERN WALL OF NINOLE POND AND SMALL POND NE OF NINOLE POND (at left in photo).

(From Brigham, 1907)

Fig. 24. CHURCH AT WAIOHINU WRECKED BY EARTHQUAKE, APRIL 2, 1868.

REFERENCES

Baker, H.L., T. Sahara, T.M. Ryan, E.T. Murabayashi, A.Y. Ching, F.N. Fujimura, and I. Kuwahara
1965 *Detailed Land Classification - Island of Hawaii.* Land Study Bull. No. 6. U. Hawaii. Honolulu.

Brigham, William T.
1909 *The Volcanoes of Kilauea and Mauna Loa on the Island of Hawaii.* B.P. Bishop Mus. Mem. 2(4). Honolulu.

Coulter, John Wesley
1931 *Population and Utilization of Land and Sea in Hawaii, 1853.* B.P. Bishop Mus. Bull. No. 88. Honolulu.

Ellis, Rev. William
1963 *Journal of William Ellis.* Advertiser Pub. Co. Honolulu.

Hommon, Robert J.
n.d. Report on an archaeological survey of Ninole and Wailau (1971). Ms. in Dept. Anthropology. B.P. Bishop Museum. Honolulu.

1970 Notes on "A Formal Classification of Hawaiian Archaeological Features." *Hawaii State Archaeological Jour. 70-2.* Dept. of Land and Natural Resources. Honolulu.

Kau Grant Book. Notes by surveyor in Kau, Hawaii, 1852. Book in State Surveyor's Office. Honolulu.

Map of Royal Patent Grants No. 821 to Holoua and 828 to Kekaula. Copies in State Land Office. Honolulu.

Map of Portion of Ninole and Wailau Remnants, Kau, Hawaii (Reg. No. 2395) as surveyed by Geo. F. Wright, 1907. Copy in State Surveyor's Office. Honolulu.

Pukui, Mary Kawena, and Samuel H. Elbert
1965 *Hawaiian-English Dictionary.* U. Hawaii Press. Honolulu.

Ripperton, J.C. and E.Y. Hosaka
1942 *Vegetation and Zones of Hawaii.* Hawaii Agricultural Experiment Sta. Bull. 89. Honolulu.

Stearns, Harold T., and William O. Clark
1930 *Geology and Water Resources of the Kau District.* Hawaii Geological Survey, Water-Supply Paper 616. Honolulu.

2-24-84 Honolulu Star-Bulletin

The Richness of Our Ancient

By Russ Apple

Tales of Old Hawaii Columnist

ESTUARIES ARE SAID to be about 20 times more productive than an alfalfa field, acre for acre, and about twice as productive as a corn field.

Long before — perhaps three centuries before — Western scientists began to study, appreciate and protect estuaries, ancient Hawaiians put estuaries to work for their gods and for their high chiefs.

Ancient Hawaiians farmed fish in their manmade estuaries.

Hawaiian fishponds were estuaries.

On the Mainland, estuaries are thought of as river mouths invaded by ocean tides to mix fresh water and salt water in shallow bays and flats.

Flip that concept around for Hawaiian fishponds.

Hawaiian fishponds enclosed shallow parts of the ocean. Sometimes Hawaiians used natural ponds behind barrier dunes of sand; sometimes they built long rock walls to encircle ocean water on reef flats. Fresh water invaded the ponds from streams and springs.

Nutrients came in Hawai'i's fishponds on each tide. Nutrients also arrived constantly from inland, carried from watersheds to the ponds by streams.

When rain fell, surface runoffs dumped even more nutrients into the ponds.

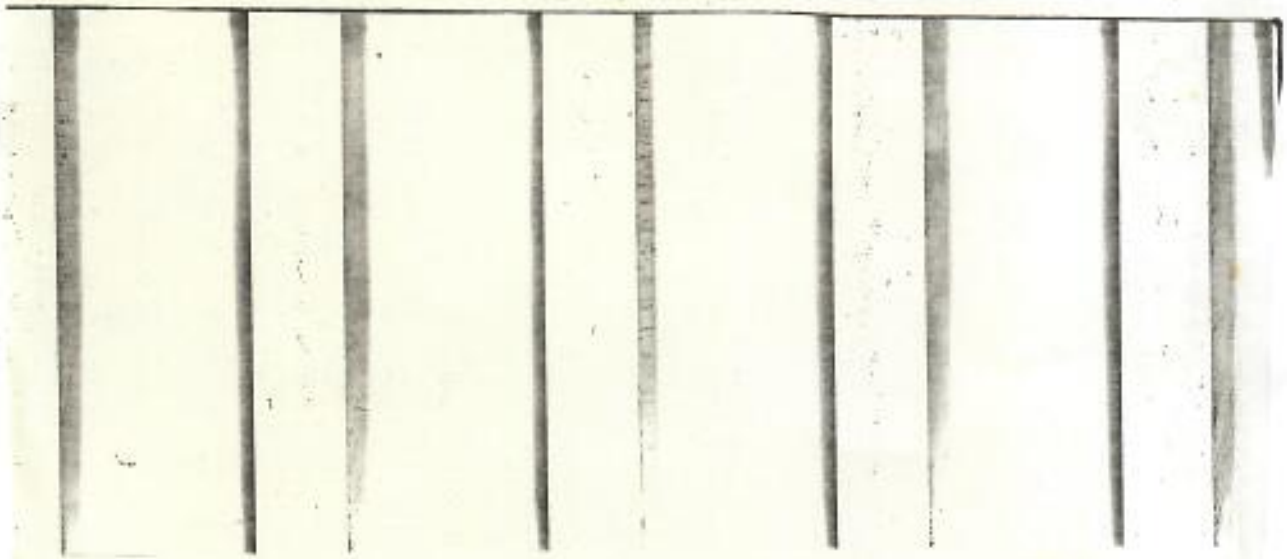
Estuaries and Hawaiian fishponds were productive because sunlight could penetrate their shallow depths.

Estuaries occur naturally on the continents.

HAWAIIANS BUILT their own estuaries. Fishponds were such handy and reliable sources of protein food that Hawaiian chiefs built them along coasts wherever natural features permitted.

At the time of Kamehameha the Great there were about 335 royal fishponds scattered around the coasts of most of the Islands. Each was controlled by a high chief and its products of fish, seaweed and crustaceans were kapu to commoners.

How did Hawaiian fishponds — manmade estuaries — work?



A-14

Fishponds

Remember that each Hawaiian fishpond was an enclosed body of water. Each was unique in its physical, chemical and biological attributes.

It's the sunlight that makes them work.

Sunlight penetrates down in the pond water. How much goes down and how far depends on the translucency of the water.

Scientists term the little particles suspended in water turbidity. Murky water has high turbidity. High turbidity slows the growth rates of fish, and of all the things fish like to eat.

Fishponds of ancient Hawai'i had clear water, low turbidity.

(Today, most surviving fishponds have high turbidity. Modern man has fooled with the watersheds and muddied up shore waters near the fishponds.)

Nutrients from tides and watersheds fed the plant plankton. Sunlight made the plant plankton grow and grow.

THAT GREEN or blue-green algae seen in some of the ponds today is plant plankton. Animal plankton eat the plant plankton. Fish eat the animal plankton. So do lobsters, crabs and shrimps. Bigger fish eat the smaller fish that ate the animal plankton.

That's the food chain of the Hawaiian fishpond. It went on until a fat, big fish was placed on the altar to the gods, and another placed before a high chief.

That chief also got the shellfish and seaweed from his royal pond.

In that food chain, each time there was a transfer of food energy upward, there was about a 90 percent energy loss.

It took a thousand pounds of plant plankton to produce about a hundred pounds of animal plankton.

It took about 100 pounds of animal plankton to produce the 10-pound fish that went on the altar.

And another thousand pounds of plant plankton to start the food chain which resulted in the 10-pounder placed before the chief.

Archaeologists Dig New Bellows Site

ARTIFACT—Further research is needed to date artifacts, such as this one, found at Bellows Air Force Station.

Continued from Page One

apparently was used in grating coconut, and a larger one, also made from a conus shell, but with a part broken off. He also pointed to a tiny adz, made from basalt.

He said that similar forms have been noted on adzes found in the Marquesas Islands, but that it is premature to link these artifacts with the Marquesas. In any case, they are of unusual shape, compared to Hawaiian artifacts usually found in the islands.

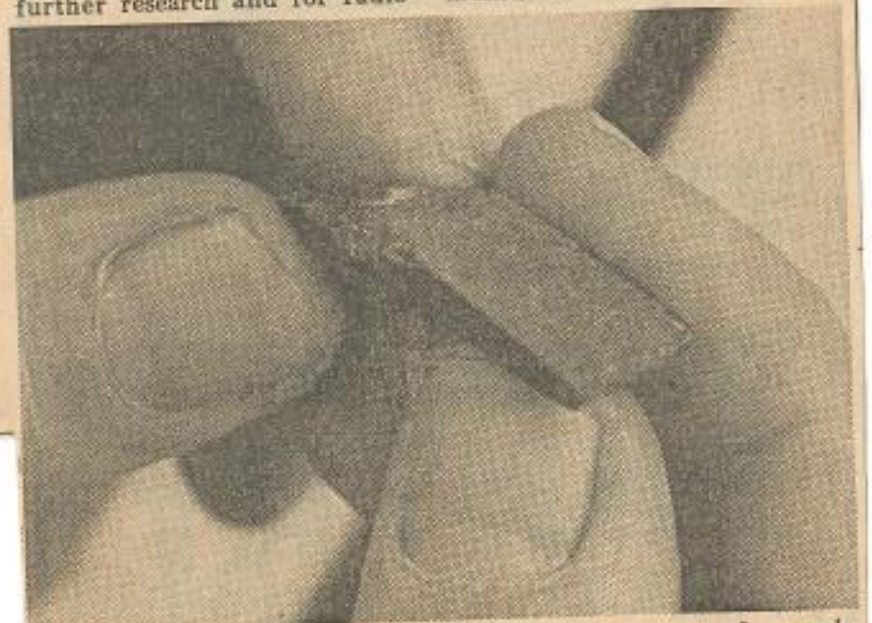
He also held up a small artifact, made from bone, that probably was an ornament. Other archaeologists to whom he had shown it said they had not seen anything like it.

Also in the museum laboratory are human bones discovered at the site and which have been assembled to form an almost complete skeleton. The teeth indicate the remains are those of a juvenile about nine years old, Cleghorn said.

HE SAID the Air Force had been very supportive of the archaeological work and had followed all federal guidelines.

He emphasized that excavations have not been extensive so far, that the archaeologists don't yet know the depth of the site or the subsurface features. They will need to collect further data in order to apply for funding for further research and for radiocarbon dating of artifacts found so far.

The site may be reburied until such time as proper excavations can be conducted, he said, but some systematic work needs to be done before this reburial. There is some urgency to doing this work because wind and rain erosion could damage the site in the meantime.



PART OF ADZ—Paul Cleghorn holds a fragmant of an adz found recently at a new archaeological site that the Bishop Museum has been investigating for the U.S. Air Force. —Star-Bulletin Photos by John Titchen.

SKELETON—Paul Cleghorn points to parts of a nearly complete skeleton assembled from bones found at a new archaeological site. The bones are those of a juvenile about 9 years old, he said. —Star-Bulletin Photo by John Titchen.

3-23-83 Honolulu Star-Bulletin Telephone –

Scientists Excited by Bellows Digs

By Harry Whitten
Star-Bulletin Writer

Archaeologists at the Bishop Museum are excited about the discovery of a new site at Bellows Air Force Station that may hold remains of one of the oldest settlements in the islands.

The site is near one discovered in 1967 which archaeologists said was the oldest settlement to be found on Oahu and one of the oldest in the state. Through radiocarbon dating, they decided the site was occupied by a fishing village from about 600 to 1100 A.D.

A study of artifacts found at the new site reveals similarities to those at the earlier discovery and indicates the settlement may have been as old, according to Paul Cleghorn, principal investigator.

He said, however, that further research and radiocarbon dating will be needed to get an estimate on the age of the settlement at the new site.

The U. S. Air Force contracted with the Bishop Museum to do three weeks of archaeological monitoring, a requirement when vegetation is being cleared, and work began in late January.

Working with Cleghorn, who is contract archaeology manager at the museum, were Helen Leidemann, field director, and Charles Streck, field assistant.

The new site is several hundred square meters in size and contains fairly extensive cultural deposits, Cleghorn said. About 350 artifacts were collected.

ARTIFACTS WERE found in a sandy deposit. Flakes of basalt indicated that material for manufacturing adzes — cutting tools — were taken to the site. Bones from human burials were also found, as well as fire pits.

Cleghorn pointed to unusual features of some of the artifacts under study at the museum. He held up an adz that was flat on one side and convex on the other, differing from Hawaiian adzes that are usually rectangular. He held up another cutting tool, made from a conus shell and almost circular in shape, that

Turn to Page A-12, Col. 1

3-28 – no turtle parts yet. no harassing calls

The Building of Fishponds

Tales of Old Hawaii

By Russ and Peg Apple

TO BUILD their many fishponds, ancient Hawaiians gathered their materials locally on each island. Ancient Hawaiian fishponds were made on the seven major islands—Ni'ihau, Kaua'i, O'ahu, Moloka'i, Lanai'i, Maui and Hawai'i.

Not until the 1800s did foreign metal, cement, timber and cordage become available here—then these only supplemented the native materials.

Shore and inland areas provided the rocks. Cool upland forests provided the timber and cordage.

Since the chief who owned the land was having the fishpond built for his exclusive use, he made available his land unit for the natural products. His resident land manager showed the builders which trees to take and where to strip the bark and pull vines to twist cordage.

HAWAI'I AND Maui islands had lots of 'a'a and pahoehoe fragments to use in putting up fishpond walls. The other islands used what they had most of, usually eroded rocks without sharp corners or flat faces. Dead branches and lumps of coral were gathered from shoals, beaches and shore for use as wall fill.

Materials that were available locally, transported by human muscle, were used by the ancient Hawaiians in building their fishponds.

Walls of three ponds in Pearl Harbor were made from slabs of solidified beachrock, which forms the basic landform of that region. One form of lime-secreting algae may have been used intentionally by the Hawaiians on Moloka'i island which eventually cemented their walls.

THE WIDEST and most massive (but not the longest) fishpond wall is that of Kaloko, north Kona, Hawai'i. It is built of basalt boulders available locally.

Kaloko's wall is 750 feet long and rests directly on an ancient submerged lava flow. It measures 35 to 40 feet wide at its base and is 6½ feet high.

Kaloko fishpond wall's seaward face has more lean-in or inclination than its pond face. The ancient Hawaiian engineers built it that way so the seawall could take the constant poundings of the waves. Calmer pond waters wash the more-vertical inner face.

WHO BUILT THE fishponds? There were 350 or more.

Documents say that only 23 were built by man. These include Keawanui on Moloka'i; Haneo'o at Hana on Maui; two ponds in Ka'u, Big Island, at Honu'apo and Ninole; and 'Opae'ula at Makalawena, Kona, Big Island.

Most of the other 327 ponds or so have their assemblies attributed to the *menehune*, mythical, supernaturally endowed dwarfs.

Menehune always completed their tasks in one single night and always worked with rock as their building material.

Whether built by menehune or man, the method attributed to the builders was similar. Builders stood in a line from the source of rock to the construction site on the shore and passed rocks of huge size along the human (or superhuman) chain.

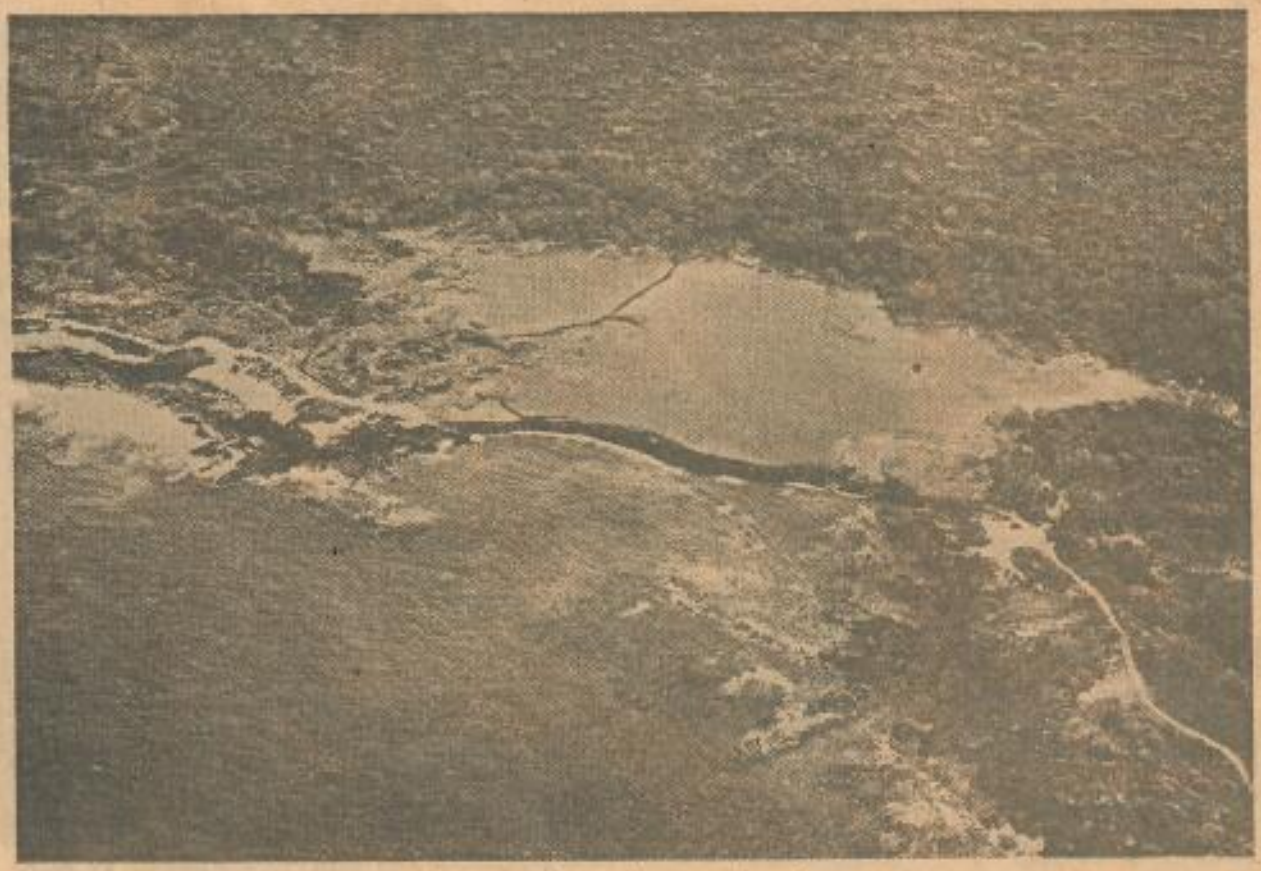
Rocks were said to be as light as feathers to the workers.

MOVEMENT OF the materials was said to be swift and the rocks were accurately assembled at their destinations. Distances over which rocks were said to have been transported to fishpond sites often were more than a mile and sometimes over mountain ranges.

The massiveness of some of Hawaii's ponds suggests that assembly was actually intensive and lengthy, as well as costly in terms of material, manpower and any subsidy in feeding and housing.

Hawaiian builders did not have the wheel, pulleys, rollers or sleds to lift or transport heavy objects. They used ropes, litters, digging sticks and human muscle.

Sept 13, 1975 Star-Bulletin



Kaloko Pond on the Big Island

The Fishpond Ecosystem

Tales of Old Hawaii

By Russ and Peg Apple

COMPARED WITH other Pacific island groups, Hawaiian waters are poor in nutrients — the plankton on which some fish feed.

This doesn't mean Hawaii's waters don't have fish, but just fewer than some other island groups.

To compensate for their comparatively unproductive waters, the ancient Hawaiians developed fishponds for their chiefs. Hawaiians took good care of their chiefs, for the chiefs were the closest living relatives of the gods.

Fishponds insured there would always be fish to feed the chiefs, for Hawaii's ponds were almost unaffected by bad weather or bad seasons.

Commoners did not get cut in on the products which came from royal fishponds.

EACH HAWAIIAN fishpond was an enclosed body of water and unique in its physical, chemical and biological attributes. Fishponds in ancient Hawaii could almost be considered estuaries. Man made-estuaries.

"Fishponds insured there would always be fish to feed the chiefs, for Hawaii's ponds were almost unaffected by bad weather or bad seasons."

Estuaries are productive because of their shallow depth (the sunlight can penetrate), the circulation brought on by tidal flow and the nutrients carried into the estuary by each high tide.

Estuaries have a reputation for being about 20 times more productive than an alfalfa field, and twice as productive as a corn field.

Hawaii's shallow fishponds had nutrients come into them with each tide, and also some from streams. Springs often pumped in fresh water.

SUNLIGHT PENETRATES into Hawaiian fishponds, but the amount which goes down and how far depends on the translucency of the water. The scientific term for little particles suspended in water is turbidity. Murky water has high turbidity.

High turbidity slows the growth rates of fish, and all the things fish like to eat.

Bill Kikuchi, anthropologist at Kaua'i Community College, who has studied Hawaii's fishponds for years, believes the fishponds of ancient Hawaii had clear water, not like most of them today.

Hawaiian sunlight made the plant plankton in ancient Hawaiian fishponds grow and grow.

THAT GREEN, or blue and green algae seen in some of the ponds today represents the plant plankton. Animal plankton eat the plant plankton.

Fish eat the animal plankton. So do lobsters, crabs and shrimps.

Bigger fish eat the smaller fish that eat the animal plankton.

The food chain of the Hawaiian fishpond went up until a big fish was placed before a chief.

He also got the shellfish and seaweed from his royal pond.

IN THAT FOOD chain, each time there is a transfer of food energy upward, there is about a 90 per cent energy loss.

It takes a thousand pounds of plant plankton to produce about a hundred pounds of animal plankton.

It takes about 100 pounds of animal plankton to produce ten pounds of fish.

That's why a good watershed inland of a Hawaiian fishpond, and good clear ocean just outside, such as existed in Hawaiian times, made the fishponds so productive. The watersheds and oceans provided the organic and inorganic nutrients that went into that 1,000 pounds of plant plankton that started the food chain upwards towards that ten pounds of fish for the chief.

MODERN MAN has fooled with the watersheds and muddied up shore waters near the fishponds.

With a lowered, and sometimes contaminated base today for the food chain, even a well managed fishpond probably couldn't produce as well as it did in the time of Kamehameha the Great.

June 28, 75 Hono S-B

Heeia Fishpond on Kaneohe Bay, one of many built by the ancient Hawaiians.

Fishpond in Crater

Tales of Old Hawaii

By Russ and Peg Apple

NOMILU? WHO ever heard of Nomilu fishpond? Probably nobody but a few old time Kaua'i folks.

Nomilu is an ancient Hawaiian fishpond in an extinct volcanic cinder cone of the same name in the land of Kalaheo on the shoreline of Kaua'i Island.

Even though its fame today is naught, Nomilu not only has fascinating lore and history but in a recent Statewide survey of ancient Hawaiian fishponds it ranked highest in surviving integrity.

Nomilu could probably go back to work tomorrow raising fish in the old Hawaiian style.

WHY IS NOMILU not better known? Until May, 1976, Nomilu was part of the unpublished history of Kaua'i Island. Then Kaua'i research specialists Pila Kikuchi and Catherine Stauder unravelled Nomilu's story for Archaeology on Kaua'i, a periodical of Kikuchi's Anthropology Club at Kaua'i Community College.

Kauai research specialists are few. Kikuchi and Stauder are professional workers in this badly needed sub-speciality of Hawaiian prehistory and history. Kikuchi is a University of Hawai'i anthropologist and Stauder is the historian of the Kaua'i Historical Society.

Kaua'i has always been different and did not swim in the mainstream of Island history. Apparently because Kaua'i was never conquered by Kamehameha the Great, historians have largely ignored Kaua'i and concentrated on Kamehameha and the kingdom he founded in 1795. Kaua'i joined it voluntarily in 1810. Monarchy historians began to include more information about Kaua'i after 1820 when Kaua'i's first Christian missionaries landed and began keeping records.

KAUA'I IS different in many ways from its Neighbor Islands to the southeast.

For instance, Kaua'i was the only island with ring-shaped handles on its stone poi pounders. Kaua'i women regularly pounded poi, while in the rest of Hawai'i only men did so. Speech on Kaua'i and Ni'ihau featured the "T" sound in contrast to the predominant "K" sound of the other islands. The extent and reasons for the differences are a study sub-speciality now being tapped.

Kikuchi and Stauder found that in ancient Hawai'i, Nomilu was a *wahi-pana*, an isolated place so famous that a visitor to Kaua'i could not claim to have really seen the island unless he had been there.

One reason for its fame was its salt pans, where seawater was evaporated. Water from Nomilu's was used in the pans and was [illegible] particularly salty.

AS ANY DECENT fishpond should, Nomilu had legends.

Volcano goddess Pele, in her search for a suitable home, once moved to Nomilu in her Kaua'i days. Pele dug three holes hoping to find fresh water. Seawater rushed in—Pele left for O'ahu Island—to leave the brackish water lake which the Hawaiians turned into a productive fishpond.

Menehune are involved, of course. After Kaua'i's little people had finished one task—building a monument on top of a mountain—they shouted so loudly that the fish in Nomilu jumped in fright.

The ancient fishpond in the land of Kalaheo is in good enough condition that it could be used today.

An 1854 visit to Nomilu by a haole called it a natural curiosity, a crater lake 300 yards (274 meters) long, 200 yards (192 meters) wide, and five to 11 fathoms (nine to 20 meters) deep. By 1854, Nomilu was already known as a fishpond of great antiquity, and its small village, where lived the keepers and salt makers, and their families, was on the side near the sea, where the crater walls are almost broken down to sea level.

IN THOSE DAYS, a hand-dug ditch linked Nomilu's waters with the sea. In the ditch was a grate to keep the pond fish from escaping. That ditch is now almost completely silted-in with fine volcanic ash and cinders. It was kept open then by hand labor, because in it the mature fish ready for harvest gathered at the grate on the incoming tide.

Netting fish in the ditch was easy.

Cash economy when it came put that ditch out of business. It was too expensive to pay workers to keep it open. That left Nomilu without a controlled connection to the sea. (Nomilu follows the tide up and down naturally).

To get a connection where fish could be easily netted, the lessee of Nomilu tried to tunnel through the cinder cone walls between the pond and the ocean. His first attempt failed because the sea filled the tunnel almost immediately with silt.

ABOUT 1921, lessee Shimamoto dug his second tunnel—it worked. With hammer and cold chisel, he excavated a tunnel 150 feet (46 meters) long, 5 feet (1.5 meters) high and 4 feet (1.2 meters) wide to remove about 110 cubic yards (84 cubic meters) of cinders. Grates at both ends of the tunnel controlled the fish.

Mullet, the preferred fish for sale, would not breed in the pond. Shimamoto hired sampans to fish near Lawa'i River or off Hanapepe to net schools of young mullet.

These went in tubs on the boat back to Nomilu where they were taken in buckets to the pond to grow big and fat for the market.

Local lore says Pele still haunts Nomilu with volcanic activity from her home in Kilauea on the Big Island. Sulfurous fumes are said to rise occasionally from the holes she dug to kill fish. The last time this may have happened was in 1921.

National Park Service Photo

Nomilu Fishpond

Arts and Crafts of Hawaii
XIII Death and Burial
P. H. Buck
565-585

KAHILIS[12]

Brigham (1899, p. 18) describes the use of kahilis in conjunction with state funerals as follows: "The very grand effect of the kahilis carried in a funeral procession will not easily be forgotten by those who have been present at such functions. . . . the graceful forms add dignity to the stream of humanity almost as palms do to a tropical sunset. Nor alone in procession,—grouped about a throne or a bier they both decorate and add dignity to the place."

What is apparently the first mention of such a procession in the literature is made by the Reverend C. S. Stewart (1828, pp. 117-118). He describes a celebration in May 1823 on Oahu, three years after the arrival of the first missionaries, in memory of Kamehameha the Great. Of the kahilis he says, ". . . each

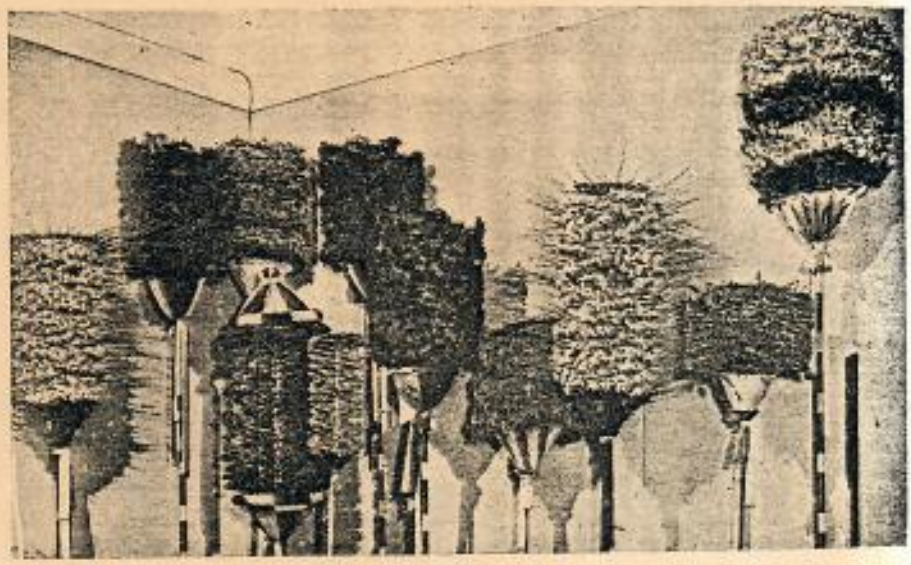


FIGURE 349.—Modern kahilis.

bearing a kahile or feathered staff of state, near thirty feet in height. The upper parts of these kahiles were of scarlet feathers, so ingeniously and beautifully arranged on artificial branches attached to the staff, as to form cylinders fifteen or eighteen inches in diameter, and twelve or fourteen feet long; the lower parts or handles were covered with alternate rings of tortoise shell and ivory, of the greatest workmanship and highest polish. . . . There is something approaching the *sublime* in the lofty noddings of the kahiles of state as they tower far above the heads of the group whose distinction they proclaim. . . ."

[12] Dr. Buck left no manuscript or notes on the subject of kahilis, probably because he felt there was no evidence of their antiquity. However, as they were a conspicuous part of funerals and funeral processions during the days of the monarchy, a brief summary of the information available in the literature is given here.—Editor.

B.P. Bishop Museum Spec. Pub. 45
964

Stewart (1828, p.
back the bodies of Li
sion which escorted t
in the native costume
each two bearing an
from one to two feet
green, and others aga

It is generally be
used as insignia of ra
(1951, p. 77), "The
and embellishment of
(*paa-kahili*); and wh
the king slept the *kah*
possession solely of th

Buck (1930, p. 66
Hawaii writes as follo
regalia and is associa
distinct local develop

Brigham (1899, p
as a fly-flap was the
kahili seems to have
[*hili*, to braid or tie
times twenty feet high
of feathers. . . . Nei
for they never saw th

The feathered por
bird, *'o'o*, frigate bir
together with *olona* fi
leaf midrib. The pol
elaborate ones were
a slender core of *ka*
fashion these disks a
a kahili handle, in co
or to inlay spittoons.
contains the right shi
Kalanikupule, and ot
in 1795 and were th
referred to by Brigha
[kahili] dates from
the funerals of his de

Brigham lists the
remarks (p. 25) that

Stewart (1828, p. 348), who was in Honolulu when Lord Byron brought back the bodies of Liholiho and Kamamalu (in 1825) also describes the procession which escorted the caskets to a temporary mausoleum: ". . . Twenty men, in the native costume of black, some with the addition of rich feather cloaks, each two bearing an immense feathered staff of state, about thirty feet long, and from one to two feet in diameter, some of black, some of crimson, others of green, and others again of yellow feathers."

It is generally believed that the large kahilis (fig. 349) which came to be used as insignia of rank in historic times evolved from the fly whisk. Malo says (1951, p. 77), "The *kahili*, a fly brush or plumed staff of state, was the emblem and embellishment of royalty. Where the king went, there went his *kahili* bearer (*paa-kahili*); and where he stopped, there stopped also the *kahili* bearer. When the king slept the *kahili* was waved over him as a fly-brush. The *kahili* was the possession solely of the *alii*."

Buck (1930, p. 662), comparing the fly flap, or whisk, of Samoa with that of Hawaii writes as follows: "The Hawaiian feather whisk is part of a high chief's regalia and is associated with the feather cloak and feather helmet which form a distinct local development."

Brigham (1899, p. 14) says: "It is probable that a bunch of feathers used as a fly-flap was the primal form of feather work. . . . and the prototype of the kahili seems to have been a stem . . . of the ki." He also writes: "The kahili [*hili*, to braid or tie on] in its greatest development consisted of a pole sometimes twenty feet high, to the upper end of which was attached the *hulu* or cluster of feathers. . . . Neither Cook nor Vancouver mentions these immense kahilis, for they never saw them, no royal funeral occurring during their stay.

The feathered portion (*hulumanu*) was usually made of feathers of the tropic bird, *'o'o*, frigate bird, owl, *'i'iwi*, or barnyard fowl. Several feathers were tied together with *olona* fiber to form bunches which, in turn, were tied to a coconut-leaf midrib. The poles were usually made out of a *kauila* wood spear, but more elaborate ones were made by stringing disks of tortoise shell, bone, or ivory on a slender core of *kauila* wood or whalebone. Leg bones were usually used to fashion these disks and it was considered an honor to have one's bones used on a kahili handle, in contrast to the insult when the bones were used as fishhooks or to inlay spittoons. The handle of one kahili in the museum collection (114) contains the right shin bone of Kaeoneo (fig. 350), as well as bones of Kaiana, Kalanikupule, and other lesser chiefs who were killed in the battle of Nuuanu in 1795 and were thus honored by Kamehameha. This is probably the kahili referred to by Brigham (1903a, pp. 13-14) in the following remark: "The oldest [kahili] dates from the reign of Kamehameha I, others have been used at all the funerals of his descendants of royal rank."

Brigham lists the large kahilis in Bishop Museum (1899, pp. 21-24) and remarks (p. 25) that he makes no attempt to describe the many small kahilis in

the Museum because "while they are in great number and variety, and often of considerable beauty, they are generally quite modern and made of foreign feathers."

FIGURE 350.—Kahili with human bone inlay in pole.

The legends and myths of Hawaii by His Hawaiian Majesty Kalakaua

CHARACTERS.

MAKAKEHAU, a chief of Lanai.
PUUPEHE, daughter of a chief of Maui.

THE TOMB OF PUUPEHE.

A LEGEND OF THE ISLAND OF LANAI.

SAILING along the lee-shore or southwest coast of Lanai, a huge block of red lava, sixty feet in diameter and eighty or more feet in height, is discerned standing out in the sea, and detached from the mainland some fifty or sixty fathoms. The sides are precipitous, offering no possible means of ascent, and against it the waves dash in fury, and in the niches of its storm-worn angles the birds of ocean build their nests. Observed from the overhanging bluff of the neighboring shore, on the summit of the lonely column is seen a small enclosure formed by a low but well-defined stone wall. This is known as "The tomb of Puupehe"—the last resting-place of one of the most beautiful of the daughters of Maui, whose body was buried there by her distracted husband and lover, Makakehau, a warrior of Lanai. How the summit was reached by the lover with his precious burden is a mystery, but the wall is still there to show that the ascent was made in some manner, and tradition assumes that it was through the agency of supernatural forces.

Puupehe was the daughter of Uaua, a petty chief of Maui, and Makakehau won her, it is related without detail, as the joint prize of love and war. How this could have occurred it is difficult to imagine, since Lanai was always a dependency of Maui in the past, and no direct wars between the two islands are mentioned by tradition. It may therefore be inferred that she was the spoil of some private predatory expedition, and that the efforts of the young warrior to jealously seclude her from the gaze of men were prompted not more by the infatuations of her beauty than the fear that she might be recaptured.

However this may have been, they are described in the *Kanikau*, or "Lamentation of Puupehe," as mutually captive to each other in the bonds of love. The maiden was a sweet flower of Hawaiian beauty. Her glossy brown and spotless

body "shone like the clear sun rising out of Heleakala." Her flowing hair, bound by wreaths of *pīkaki* blossoms, streamed forth as she ran "like the surf-crests scudding before the wind," and the starry eyes of the daughter of Uaua so dazzled the youthful brave that he was called Makakehau, or "Misty Eyes."

Fearing that the radiant beauty of his captive might cause her to be coveted by some of the chiefs of the land, he said to her: "We love each other well. Let us go to the clear waters of Kalulu. There we will fish together for the *kala* and *konita*, and there will I spear the turtle. I will hide you, O light of my heart! in the cave of Malauea. Or we will dwell together in the great ravine of Palawai, where we will eat the young of the *uwau*, and bake them in the *ti* leaf with the sweet *pala* root. The *ohelo* berries of the Kuahiwa will refresh us, and we will drink of the cool waters of Maunalei. I will thatch a hut in the thicket of Kaohai, and we will love on till the stars die."

The *melos* tell of their loves in the Pulou Ravine, where they caught the bright *iwi* birds and scarlet *apapani*. How sweet were their joys in the *mala* groves of Waiakeakua, where the lovers saw naught so beautiful as themselves! But the misty eyes were soon to be made dimmer by weeping, and dimmer till the drowning brine should shut out their light for ever.

Makakehau left his love one day in the cave of Malauea, while he went to the mountain to fill the *kuaiwai* with sweet water. This cavern yawns at the base of the cliff overlooking the rock of Puupehe. The sea surges far within, but there is an inner space or chamber which the expert swimmer can reach, and where Puupehe had often found seclusion, and baked the *honu*, or sea-turtle, for her absent lover.

This was the season for the *kona*, the terrific storm that comes up from the equator, and hurls the billows of ocean with increased violence against the southern shores of the Hawaiian Islands.

Makakehau beheld from the rocky springs of Pulou the vanguard of an approaching *kona*—scuds of rain and thick mist rushing with a howling wind across the round valley of Palawai. He knew the storm would fill the cave with a wild and sudden rush of waters, and destroy the life of his beautiful Puupehe.

Every moment was precious. He flung aside his calabashes

of water, and at the top of his speed started down the mountain. With mighty and rapid strides he crossed the great valley, where he met the coming storm in its fury. Over the rim he dashed with an agonized heart, and down the ragged slope of the *kula* to the shore, which the waves were already lashing in a voice of thunder.

The sea was up, indeed! The yeasty foam of surging, windrent billows whitened the cliffs, and the tempest chorussed the mad anthem of the battling waves. Oh! where should Misty Eyes seek for his love in the blinding storm?

A rushing mountain of sea fills the mouth of the cave of Malauea, and the pent air within hurls back the invading torrent with a stubborn roar, blowing outward great streams of spray. It is a savage war of the elements—a battle of the forces of nature well calculated to thrill with pleasure the hearts of strong men. But a lover looking into the seething gulf of the whirlpool—what would be to him the sublime conflict? what to see amid the boiling brine the upturned face and tender body of the idol of his heart?

Others might agonize on the brink, but Misty Eyes sprang into the dreadful caldron and snatched his lifeless love from the jaws of an ocean grave.

The next day fishermen heard the lamentation of Makakehau, and the women of the valley came down and wailed over Puupehe. They wrapped her body in bright, new *kapa*, and covered it with garlands of fragrant *maun*. They prepared it for interment, and were about to place it in the burial ground of Manele; but Makakehau prayed that he might be left alone one night more with his lost love, and the request was not refused.

When the women returned the morning following they found neither corpse nor wailing lover. At length, looking toward the rock of Puupehe, they discovered Makakehau at work on the lofty apex of the lone sea-tower. The wondering people of the island watched him with amazement from the neighboring cliffs, but, heedless of their observation, he continued his labors. Some sailed around the base of the column in their canoes, but could discover no means of ascent. Every face of the rock was either perpendicular or overhanging.

The conviction then became general—since there seemed to be no other possible explanation—that some sympathizing *akua*,

or spirit, had responded to the prayer of Makakehau, and assisted him in reaching the summit of the tower with the body of his dead bride; and in this form has tradition brought down the touching story.

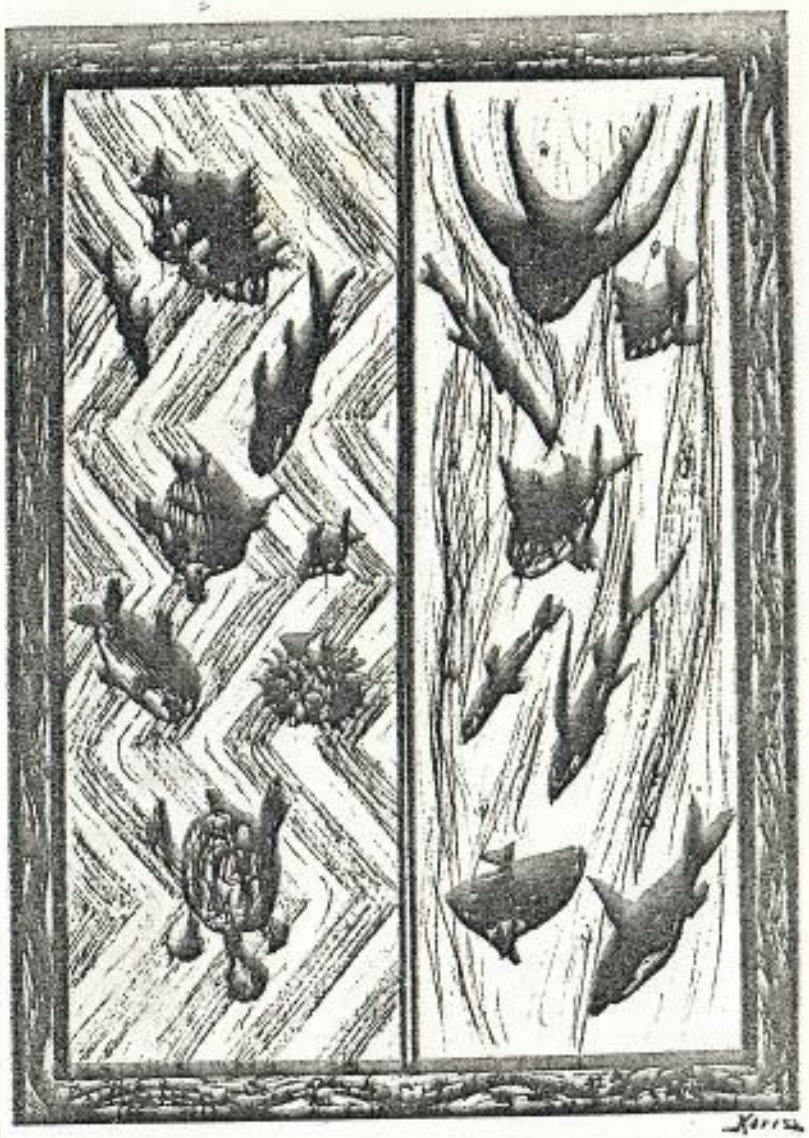
Makakehau finished his labors. He laid his love in a grave prepared by his own hands, placed the last stone upon it, and then stretched out his arms and thus wailed for Puupehe:

"Where are you, O Puupehe?
Are you in the cave of Malaeea?
Shall I bring you sweet water,
The water of the fountain?
Shall I bring the *uwau*,
The *pala* and *ohelo*?
Are you baking the *kowa*?
And the red, sweet *kalo*?
Shall I pound the *kalo* of Maui?
Shall we dip in the gourd together?
The bird and the fish are bitter,
And the mountain water is sour,
I shall drink it no more;
I shall drink with Aipuhi,
The great shark of Manele."

Ceasing his sad wail, Makakehau gazed for a moment upon the grave where were buried the light and hope of his life, and then leaped from the rock into the boiling surge at its base. His body was crushed in the breakers. The witnesses of the sacrifice secured the mangled remains of the dead lover, and interred them with respect in the *kupapau* of Manele.

This is the story told by the old bards of Lanai of the lonely rock of Puupehe, and the still inaccessible summit, with the marks of a grave upon it, attests with reasonable certainty that the *mele* has something of a foundation in fact.

THE STORY OF LAIEIKAWAI.



No. 32

Tane's Marine Children

They were born swimming in the Ocean of the Sun in the sky. They swam to their new homes on earth in a pacific waterfall and frolicked and played along the way.

Umi's army was in difficulty at this place on account of the road, and they began to move forward in single file in descending the pali. As they emerged therefrom they came to a very narrow passage where they had to suspend and swing themselves forward, but the place occupied by Nau gave him a commanding, sheltered position, so that when an invader stretched forth his hand in descent he was thrust through with his spear so that each leapt the precipice to their death. And thus it continued so that many were killed by this one man because of the narrow and difficult roadway. Forty were the number thus killed. But Piimaiwaa ascended the top of the precipice to observe the proceedings and noticed but one man commanding the defile, therefore he descended vowing vengeance upon him. By the leap of Piimaiwaa from the top of the precipice Nau came to his death, and the army moved forward.

By the death of Nau there was no one to give warning of their approach to the chiefs of Hilo, so that by sundown the battle was in progress in the town. The invaders were provided with lama torches. Umi singled out the houses of the king of Hilo, as also his daughter's, which he had surrounded by his soldiers and the chiefs slain. The daughter of Kulukulua was safeguarded in the battle and the famous ivory necklace "Nanikoki," the cause of the war, was recovered.

When the battle ended, Hilo was joined to Hamakua and Umi became its acknowledged king.

HOW PELE LOCATED ON HAWAII

FROM the legend of Aukele-nui-a-iku, the "Joseph and his brethren" story of Hawaii, with its ear-marks of great antiqnity, is selected the following account of Pele's changes in these islands, occasionally referred to, and which, strange to say, agrees with the view of geologists as to the successive order of volcanic activities in Hawaii-nei.

Aukele, under the pretense of fishing experiences to account for daily absenting himself from home, is taken to task by Namakaokahai, his wife, who, becoming suspicious of undue influences being exercised by her sisters, Pele and Hiiaka, over her lord,

visits them with jealous wrath and drives them beyond the range of their affinity power over her husband.

With all Aukele's smooth words in explanation for his absence, his wife did not believe him, and said: "You sly old thing; do you think I am a fool not to be aware of your doings and your deceit? I know whom you go down every day to see, so here is what I wish to say to you: The outside of your body is free to others, but your skin and flesh are my property. I do not want you scratched and ill-treated."

Notwithstanding these words of admonition from his wife, Aukele took no heed; they were as nothing to him, for he kept on going down to fish. Returning late again one evening with his body scratched and bitten all over and his neck cut, Namakaokahai took notice of his condition and evident disregard of her advice, but she grew less angry toward her husband and transferred her wrath upon her younger sisters, Pele and Hiiaka, the authors of all this trouble.

When Namakaokahai next saw her sisters she gave them a terrible beating, on seeing which her brothers endeavored to help them, but the interference was of no avail, for she gave them like treatment, so that they had a hard time to save themselves. Because of this Pele and Hiiaka departed to another place of abode, but Namakaokahai followed them and drove them away. They thought that in due time she would forget the cause of her anger and cease driving them from place to place, but in this they were mistaken, for they were discovered each time and forced from their new home. At this persistency of their older sister they grew so angry that the went forth, vowing they would never again turn back nor live in the same land with her.

Studying the matter of their future abode, they finally decided upon moving to the Island of Kauai, so they set out on their travels and in due time arrived there and located at a place to the south of Mana, where they hoped to live unmolested. Settling at this place they started a fire, the glare of which was seen from the high peaks of the land of Nuumealani, where Namakaokahai was stationed on the lookout for them. When the ruddy glow of volcanic fire revealed their presence on Kauai, she followed them there, and an angry fight took place in which Pele and Hiiaka

nearly overcame their sister, but, being possessed of supernatural powers, Namakaokahai in time overcame them and drove them out. Because of this incident the land on which it took place was called Puukapele, as it is known to this day.

Leaving Kauai they journeyed to Oahu and took up their abode in Kealiapaakai, at Moanalua, where they dug down into the ground for a home. On coming from Kauai they brought with them some red soil and salt, which they deposited there, hence the names Kealiamanu and Kealiapaakai to that locality. Upon finding that place too shallow they moved to Leahi. Digging here awhile and finding it also too shallow for a permanent home, they moved to Molokai and settled down at Kalaupapa. After a time, in endeavoring to locate at that place, they were again disappointed, for they struck water, which compelled them to move elsewhere. The hole they dug was called Kauhako, as it is known to this day. From Molokai they journeyed to Haleakala, on Maui. Upon arrival at this place they began digging a pit, as usual, which they left open, on the top of the mountain. The rocks in Hanakaieie and Kahikinui were those that were dug up by them and deposited there.

After Pele and Hiiaka were driven from Kauai, Namakaokahai returned to her own land and proceeded to the highest peak, from which she could see Maui. Observing a fire started, she came to their new abode, where another battle was fought, in which Pele was killed, whereupon Namakaokahai went back to the peak of Nuumealani. After a time she looked towards Hawaii and saw Pele's fire burning on Mauna Loa, but she did not return to renew her fight, thinking they had removed far enough from her.

Regarding Pele: She was indeed dead through the battle that was fought against her sister, on Mauai, but she traveled in spirit to Hawaii, where she again came back to life and resumed her volcanic powers. It was Pele and Hiiaka that dug that pit at Kilauea, on the slope of Mauna Loa, and that place has been their own to this day.

ANOTHER VANISHING LANDMARK

ANOTHER of Honolulu's landmarks is giving way to the march of progress and in this case it is in the fullness of time. The marvel is that in so central a location as Union street near Hotel, a building erected early in the "thirties" should have withstood the influence of neighborhood improvements so long.

The building in question was one of the famous "French Hotel" structures, and later prominent in the group of government offices, as will be seen as we deal with its historic changes. It is, we believe, the last but one of the adobe structures of early Honolulu (of which there were many) which bespeaks the Spanish-American influence in those days,* and in its existence of some eighty or more years has naturally had many uses that connect it with the development of the city which may afford a chapter of some interest. It has been familiar to residents as a two-story structure, adobe below and wood above, but this difference of material marks a change of enlargement that could not have taken place earlier than 1848. Originally it was a one-story adobe building, built by Dr. T. C. B. Rooke, and used by him as his dispensary for several years, while the two-story wooden building aligning on Fort street in the same premises was used as his residence until the completion of the building at the corner of Nuuanu and Beretania, known in later years as Queen Emma's.

Dr. R. W. Wood was the next occupant of this adobe building, using it for the same purpose also, his dispensary, until the completion of his new coral building, on Hotel street, afterward Dr. McGrew's, that gave way for the erection of the Alexander Young Hotel. Up to this period it was still the one-story structure.

The next tenant was Captain F. A. Newell, for, or by, whom it was altered, with an upper story of wood and lattice enclosed veranda, giving it more of the residence character. This is the same party who brought out the royal yacht *Kamehameha III*, in 1846, that was seized and run away with by *"les brave Pourse-*

* Note.—In 1847 Honolulu had no less than 345 adobe houses, and 29 of coral or adobe below and wood above.

THE LEGEND OF KANEHUNAMOKU

THE PHANTOM ISLE; HOME OF THE MENEHUNES AND MU'S.

WHEN the earth was young, and the inhabitants thereof were the children of the gods, of whom Kane and Kanaloa were recognized by the lesser deities as their supreme lord and master, emanating from Manoikulani (male) and Hihikalani (female), there was born to the said Kane and Kanaloa on the night of Hilo and Hoaka a son, who was named Kanehunamoku, who moved the flowers of Ku-kahi, there being four Kus, and four Oles. Kuiohina made possible the equilibrium of Kanehunamoku in the night of Mohalu as it evolved in space, as also during the periodical visits to Kane and Kanaloa on the nights of Akua.

The God Manokiulani held sway at the head of the clouds in the blue sky, whilst Hihikalani maintained her court at the head of the rolling clouds, and the coming together of these two clouds produced a fog or mist within the darkness of which gave birth to the white clouds which Kane and Kanaloa mistook to be a bundle rolling about in space, and, as the story goes, Kanehunamoku was therefore a direct descendant of Manokiulani and Hihikalani; in evidence whereof the lightnings flashed, the thunders roared and the earth quaked as Kanehunamoku, at birth, became separated in the rolling blood-tinted pyramidal clouds.

Upon Kanehunamoku's attaining man's estate, he entered into the flower garden of Kaonohi, the possessor of a pool of water named Manowai. For this trespass Kanaloa became angered at this conduct of her son and, consulting Kane thereon, advised the making of a law—the lightning—whereby Kanehunamoku and Kaonohi were to be banished to another land forever; that they were not to set foot on terra firma; that their land should forever move in space; their people should be dwarfs and diminutives, and their companions would be lizards, dogs, and fire. The law of dwarfishness was to be binding upon his people, and his children were destined to build rocky lands.

Kane and Kanaloa therefore created a floating land named

Kuaihelani, to which Kanehunamoku was exiled, being a land moving about in the face of the clouds in the midst of utter darkness, and so lived they all without the least idea that they were on a land moving in space driven hither and thither over the deep blue ocean by the varying winds. It was only at night, however, that this mysterious land would be in motion, like the spirit of the perturbed.

Whilst Kanehunamoku was meandering over the land of Kuaihelani he was impressed with the abundant growth of its many varieties of trees and fruit; and thus he traveled for a long period, without the light of day, until he came to a spring, the waters of which he drank that he might be endowed with wisdom, but it did not, however, lessen his ardent spirit. His proud and vigorous manhood seemed to assert itself all the more. Thus he remained at the spring, with the thought that there was no foundation beneath the land he was on. The trees and shrubbery surrounding the spring grew in the greatest profusion and luxuriance, such as the ape, awa, sugar-cane, bananas, potatoes, ti, ohia, aalii, koa, kukui, lama and others such as are found in Hawaii, but they did not satisfy.

While preoccupied in mind with the scenery about him in his loneliness, he soliloquised to himself thus: "How strange that I should be here. I have not seen any of those beautiful lustrous and shimmering clouds I was wont to see. Who are my companions that I could say were fine-appearing and handsome in this voiceless abode of mine? As I look out on the dizzy heights beyond, they surprise me. Where am I?—living in the shadow of night, below, below, in the uttermost depth?"

He cried out in exclamation, and his voice was like the sound of the beatings of kapa of ancient times, hollow and sepulchral, as emanating from some cave where there was a gathering of women at their vocation of kapa-making.

While Kanehunamoku was thus engrossed in deep meditation, with tears streaming down his face, there was wafted to his ears on the still, calm air an ethereal voice, saying: "Oh, you, who were deported from below! Continue on in thy floating kingdom over the blue ocean, the deep sea, the red sea, and move over every part of the earth. Thou wilt never behold

the beautiful again, thou proud and haughty man to the mighty Kane, the supreme and sacred God by what you did to the sacred and holy place. Let me ask you, what is your desire? Tell me."

"My wish is, that there be two of us in this place. Oh, you caterpillar! You worm! Think you, and give me an immediate answer: a wife for me! And she shall be Kaonohiula."

Then a voice came forth from the ti plant as its buds came into bloom; the thundering voice of Kanehekili, with the flashings of Kauilanui playing havoc with the floating land. While the thunder was raging and the lightning flashes were darting here and there, hailstones began to fall, and then a brood of little white chicks came running towards Kanehunamoku completely covering his front, whereupon the thunderous voice spoke again saying: "Take care of these thy people; your descendants shall be their lords; thou art to remain on this floating world within the four corners of the heavens; thy land shall be sacred; it shall not be seen in the light of day, except in certain periods of Mohalu (July) and Akua (August), and should it be observed on the outskirts of Haena, Kauai, in the months aforesaid, then know that Kanehunamoku is near on the floating land of Kaonohiula. This is an opua cloud of Kane and Kanaloa; a beautiful cloud with a woman's calm sea; a wind-tantalizing cloud; and because of the beauteousness of this cloud hence Kanehunamoku's earnest wish that Kaonohiula be his companion to roll the bowls of Kane from one end of the heavens to the other. It was a game in which both were adepts. The outer bowls in the dense darkness of the heavens would be the ones for the gods to amuse you with.

Again the voice called forth: "Oh! you vagabond of a man! To the end of your days, on the night of Hilo, you will be let loose over the great expanse of oceans; the tempestuous seas of Kane. I will make known to you the great truth, that there are three stratas to this movable home, floating over the oceans:

"First:—The first strata is the girdle encircling your land, which is yourself, and is named Kanehunamoku.

"Second:—The next is the inside strata, named Kueihelani.

"Third:—The last strata is Nuumealani, and between these two latter will be the flower garden of Uluhaimalama. Flowers of every variety and great fragrance are to be found only in Nuumealani. Kueihelani will be the abode of the wife of Kanehunamoku and their children. The first child Moonanea, will be a reptile; the second, Piliamoo, a dog; the third, Halulukoa, a caterpillar; the fourth, Halulumanu, a beautiful girl, endowed with supernatural powers; the fifth, Kuilioloa, will be a girl of fire; the sixth child, Ioiomoa, will be endowed with sacredness, upholding family purity; the seventh, Kaonui, will be an ordinary girl child. In all, the family group will be twelve in number."

Kauhai was the one assigned to set the land in motion, while Kanehunamoku, the chief, would preside over the destinies of Kueihelani and its pigmy people, comprising the Menehunes, and the Mu-ai-maia, banana-eating-bugs.

At a locality known as Laau, towards the mountain in Wainiha, Kauai, was the place where this latter race of people is said to have once lived and made their home. The traditional history of the Mus and their various occupations are not generally known though said to have been fully recorded, wherein is narrated the story of their voyage; how they landed at Peleiholani, and were taken across the mountains and lived at a place called Laauhelemai. On their arrival there they found bananas, awa, and a great variety of trees and plants. Water flowed freely in the gulches and they tilled the soil of the up-lands. They cultivated bananas and dried the fruit, wrapping it in bundles of banana leaves in large quantities as food for themselves. Their clothing was made out of dried ti and banana leaves plaited together. In their own country this was their clothing, and being a warm land food plants grew spontaneously. Their country was described as a land that moves about in the ocean. Other lands could be seen therefrom, but it could not however, annex with any of them.

As to the division of lands, above and below, they are Kueihelani, and Uluhaimalama. This latter is a garden in which are all varieties of fragrant flowers. Nuumealani is the land

of the Mu people as well as of the Menehunes and is peopled by small men in vast numbers.

The Menehunes are smooth, similar to the people of this land, but these latter have characteristics indicative of human beings. The abdomens of the Menehune people are very distended while those of the Mus are round. The former do not eat bananas but live on the smallest of fishes, nor do they eat any of the wild fruits of the land; they have other people provide them with food.

During the night of Mohalu the wild fruits would arrive in great abundance causing great commotion and the hum of voices would break the silence. Kanehunamoku is then prepared to move with his people to Pelciholani and Waiolono. It was at Pelcioholani that Kueihelani made the first connection, and it was there that the Mu people, with a certain number of the Menehunes, divided. The Mus travelled over the mountain ranges until they arrived at a big gulch with an abundance of water and there lived with their wives and other things belonging to this diminutive race. The greater portion of the people remained on the land of Kueihelani, and knew nothing of its changes, or heeded the summons to make preparation and assemble together for the forward movement.

Ikuwa (loud) is the voice of the Supreme ruler, and some of the overseers of the garden of Uluhaimalama, Uhawao and Uhalaoa led the migration toward the Kalukalu (vegetable growth). Crashing were the sounding voices moving towards the desired haven, Waimea. Papaenaena was the guard over the Menehunes, and he was an important overseer who laid out work such as the chiefs of Kauai, Kikiaola, Puulima and the Konohikis desired. Two messengers were sent by Kikiaola to convey the wishes of the people of Waimea to Papaenaena, saying: "We came to get you and your people to build the dam and water-course of Waimea; this is the message of our chiefs." "What are the names of your chiefs?" he asked. "Kikiaola is our king, and the high and sacred chiefs are at the temple (heiau) of Mokihana," they replied. They also had a second request, which was: that the Princess Namakaokahai, sacred to the gods, become the wife of their high chief. For doing the work on the dam at Waimea, the overseer gave consent, but the second request was refused.

After the messengers had delivered their message they returned to Waimea and reported that Kanehunamoku's people were agreeable to the building of the water-course, and in compliance the construction of the dam of Waimea was begun during the month of May (Makalii), in the reign of King Kikiaola.

Kanehunamoku had foreknowledge of these matters, for on a certain occasion, while enjoying life his ears began to ring, whereat he gave a deep sigh. Simultaneously he was startled by the following exclamations:

"Say! Where are you? The supreme ruler of the land floating on the sea! There is a messenger coming to get the princess and her diminutive people. Here is Hulukuamauna, the great jumping kahuna, a person endowed with great foresight, who said that only the Menehunes could build the dam of Waimea, though its chiefs may increase the number of their people many thousand. The only ones who can do so are Kanehunamoku's people. It is impossible for Waimeans and their kahunas to build it, much less the priest who stands in the sacred place of the divine kings."

While Hulukuamauna and others were standing before the pulous (tabu sticks) in front of the house of the kahuna who glides in the face of the sun, Kane spoke to him, saying: "Where are you? Go to Kanehunamoku, personally, for the services of his diminutive people. Should he consent, the trouble will be overcome, for the dam could never be built by the people of the land even though they come from the seashore of Polihale to the waters of Hanapepe. It is the people of the floating land who can accomplish the task."

Hulukuamauna asked: "What presents and sacrificial offering shall be made to you, O God! for its success?"

"One sacrifice," answered Kane; "the sanction of Kanehunamoku is required; then the work on the dam of Kikiaola will begin; it will not be finished by the offer of a fathom pig, the red fish, or the silver-gray fowl and the black coconut. He will set the date when the work will start, and it will be your duty to obey the instructions of the child of God, Kanaloa, until the

task is complete. You are to go on the day of Hinaiaeleele, or else the first Mahoe. Do not go with any offerings, but inform him of my firm belief in the accomplishment of the work, to carry out the wishes of the chiefs of Waimea."

On the arrival of Hulukuamauna in the presence of Kanehunamoku, there appeared a messenger from Kane, bearing a branch of aalii, having very fine red round fruit. This was a sign from Kane to Kanehunamoku, who took the branch and examining it closely he realized that there was some work of great importance to be performed. Koahulu on his return presented himself before his lord and master, Kane, and said: "So you are here?" "Yes," was the answer, with the query, "Where is the old man?" "He is at home." "How is it? Has he considered it?" "Yes, and he sends his felicitations, saying that the project will be undertaken. On the day of Hinaiaeleele they will arrive at Peleiholani and Waiolono. So said he."

The following day the kahuna returned and was advised of the favorable outlook. He was then instructed to fly and meet Kanehunamoku and tell him the dam of Waimea is to be constructed on the night of the first Mahoe. Upon the completion of the work the king, Kikiaola, is to sleep on the altar in compliance with the instructions of Kanehunamoku, that night being sacred to Waimea and the water project. No person, be he chief, priest, or astrologer, shall light any fire, nor shall there be any torches lit, nor shall any of the people of Waimea stir abroad that night; should they do so they will be put to death. The king, whose dam this is, shall sleep at the lower end of the ditch so that he may be deluged by the water. All these things will come to pass; he will not awake, and the kahuna will draw him out of the water, then will this ditch be completed by the sacrifice of a man; the sacrificial offering must be a chief, and as the waters flows over him on its way to the sea the Menehunes will disappear and no person will witness their departure.

This is the legend of that celebrated water-course from time immemorial to this enlightened age.

Namakaokahai went back to Kuelhelani with no intention of ever returning, as did also Kanehunamoku.

Upon the departure of the Menehunes and the Mus from

Laauhelemai, two of the latter were left behind, as they were fast asleep in the dried banana leaves, oblivious to all that was going on about them. These diminutive races went back to Kuelhelani according to the command of Kanehunamoku.

"HAWAII"

THE BEST-KNOWN BUILDING AT THE PANAMA-PACIFIC EXPOSITION, 1915.

BY ALBERT P. TAYLOR,

Secretary-Director, Hawaii Promotion Committee, Honolulu.

ALMOST in the shadow of the colorful Food Products building, just across the way from the imposing California building, and but a stone's throw from the splendor of the Fine Arts Palace, whose stately columns and facades are reflected in the placid Mirror Lagoon, the Exposition building of the Hawaiian Islands, as colorful as any of the great palaces surrounding it, became a diminutive specimen of architecture, but merely by comparison with those nearby structures which occupy acres of grounds. Although a liliputian amongst the architectural bobdignags, the Hawaii building was a colossus in popularity, for the strum of ukuleles and the tinkle of guitars gently touching passers-by, compelled entrance to the building, where the charming atmosphere of the Hawaiian Islands was immediately felt, and visitors left it filled with the desire to some day voyage out of Golden Gate across the twenty-one hundred miles of sun-kissed seas and see, for themselves, this "Paradise of the Pacific".

Hawaii's building, to some extent, followed the architectural plan employed for many of the larger exposition palaces and conformed almost entirely to the wonderful color scheme wrought by artists of world renown.

Beyond the Hawaii building are the structures erected by sovereign states of the American Republic and foreign countries. The buildings of the latter conformed to architectural standards abroad; the buildings of the states were, in many instances, of public and historical buildings, structures which

Maka-ihu-wa'a. A star (no data) [PE., 1971: 208].

Maka-'imo'imo. Name of a constellation in the Milky Way. Lit., blinking, twinkling eyes [PE., 1971: 208].

Maka-'io-lani. A star. Lit., eye of the royal hawk [PE., 1971: 208].

Makali'i. Pleiades, in the constellation Taurus [Hiroa., 1967: 256]. Guide for the early Polynesian navigators [Kalakaua., 1972: 238; Taylor., 1969: 10-11]. Lit., little eyes. Guiding star for the first month of the Hawaiian year (November-December); also marked the beginning of the year when it rose at sunset. A thousand years ago, the rising of this group of stars in the east would have occurred a month earlier, (October-November). Cf. Polynesia: Matariki (Kapingamarangi), Pleiades [Emory., 1949]; Mataliki (Futuna), Pleiades; Matariki, Matariki-tau-ono (Rarotonga), Pleiades [Savage, 1962: 265, 150]; Matariki (Maori, Moriori), Pleiades [Best., 1899: 93-121; Shand., 1898: 73-88]; Mata-ri'i (Tahiti), Pleiades [Henry., 1928]; Matari'i (Tubuai), Pleiades [Aitken, 1930: 55]; Pito-o-Matariki (Napuka, Tuamotu), Pleiades [Stimson, 1964: 392], Pleiades; Te-hanga-riki-o-Matariki (Tuamotu), Pleiades [Stimson., 1964: 103]; Li'i (Samoa), Pleiades. Cf. Micro-nesia: Matarigi (Gilberts), Pleiades. Lit., the eyes of Rigi, a god in the form of a worm (or eel) lifts the sky but whose physical exertion in doing so is too hard on him; he falls, breaking into pieces which are thrown into the sky by a compassionate god, creating the Pleiades. Versions of the Gilbertese myth of the Pleiades are found in Polynesia, particularly in Nauru [Grimble, 1922:249 -254].

Makao. A star (no data) [Kuhelani., 1856: 150].

Makaukau. A star (no data) [Kuhelani., 1856: 150].

Maka-unu-lau. Name of a navigation star. Lit., eyes drawing many [PE., 1971: 211]. See Unulau.

Makeaupe'a. Name of a star or constellation [PE., 1971: 211]. Probably the Southern Cross. See Kape'a, Mekeaupe'a, Hōkū-ke'a.

Mākohi-lani. A star name, patron of fighters [PE., 1971: 212]. See Mākaha.

Makua-ka-'ūmana. A star said to be in the Kaulua constellation [PE., 1971: 213]. Also the name of a priest who accompanied Pa'ao to Hawai'i [For., 1969: Vol.II: 18].

Makulu. Saturn [For., 1969: 127].

Malamalama. A star (no data) [Kuhelani., 1856: 150].

Mālana. A star (no data) [PE., 1971: 214].

Malianakea. A star (no data) [Kuhelani., 1856: 150].

Maliu. A star (no data) [PE., 1971: 215].

Nā INOA HOKU
R. K. Johnson and J. K. Mahelona

Mariua. Spica (Tahiti) [Henry, 1928: 136-139]. See Ana-roto, Peke-, Ruhi.

Matahetu. A constellation (Marquesas) [Handy, 1923: 352].

Matāho. A star (Tuamotu) [Stimson, 1964].

Mataheko. See Te Mataheko, Heko, Te Heko-ahiahi-pakō.

Matai'i. A star name (Marquesas). See Matariki.

Mata'iki. Variant of Mata'i'i (Marquesas) [Handy, 1923: 352].

Matalike. The Pleiades (Futuna) [JPS 1892: 33-52]. Cf. Matariki.

Matamemea. Mars (Samoa, Tonga) [Stair, 1898: 48-49]. Lit., red face. See Parearau, Te Hau-o-Rua, Maunu-ura.

Mata-nui. One of nine principal navigation stars (Manihiki, Rakahanga) [Buck, 1932: 231].

Matakaheru. The Hyades (Maori) [Williams, 1971: 187].

Mata-piri. Name of two stars which are utilized as navigational guiding stars from Vahitahi to Pinaki (Tuamotu) [Stimson, 1964: 293].

Matarei. A star (Yap) [Christian, 1897: 167].

Mata-Rigi. The Milky Way (Gilberts) [Dixon, 1916; Grimble, 1922: 249-254]. Lit., the eyes of Rigi, the worm. In tradition Rigi tries to raise the sky above the earth and succeeds but the effort exhausts him. He falls to the ground, and a compassionate god comes along and throws back into the sky the pieces which remain of him, creating the Pleiades. See Naiabu, Kanivā, Le-ao-lele, Te-Ika-kau-ki-rangi, Na Kiore, Te-Mango-roa, Moko-roa-i-ata, Vai-ora-a-Tane.

Matarika. An unidentified star (Tuamotu) [Stimson, 1964]. Probably a variant of Matariki.

Matariki. A widespread name for the Pleiades in Micronesia and Polynesia. Documented from the Cook Islands (Rakahanga, Minihiki), Marquesas, Societies, Hawaii, Nukuoro, Kapingamarangi. See Pukutea.

Matariki-tinitini. Pleiades (Mangareva) [Buck, 1938: 416]. See Pukutea.

Mataroa. Spica (Gilberts)[Goodenough, 1953: 8]. See Jaap, Gapi-sarabol.

Matatae. See Ti-matatae.

Mata-tau-inoa. A star (Tahiti) [Henry, 1907: 101-104].

Mata-uaua. A star (Marquesas) [Handy, 1923: 352].

Matawa. Scorpio and Spica (Gilberts) [Goodenough, 1953]. See Met-aryo.

Notes to Page 38 on the Nukuoro calendar [Acc. Emory, 1965: 346]:

These are the names of the 12 lunar months at Nukuoro and their equation with our months, as given by Iohanis, together with the identification of the star names, and their Kapingamarangi equivalents, as far as could be learned:

Month	Nukuoro Name	Kapingamarangi Name of Star or Constellation	Identification
January	Matariki	Matariki	Pleiades
February	Takero	Ti waka tokotoru	Belt of Orion
March	Manu	Manu	Sirius, Canis B,E
April	Itiiti	No name	One star, does not shine brightly
May	Harapori	Harapori	Spica
June	Alamoi	Romoi	Arcturus
July	Tumuru	Meremere	Antares & 2 other stars
August	Maitiki	No name	Sagittarius, 4 stars
September	Mairap	Mairap(a)	Aquila
October	Seta	Matatae	4 faint star in shape of Y
November	Laka	No name	Very faint group of stars, making a fork much like Seta
December	Tahora	No name	Cassiopeia forms the tail; a large constellation stretching across the sky

These are the same names, except for spelling, and in the same order as given to Jeschke (Eilers, 1934, p. 299). For comparison with the Micronesian names and identification of stars, see Goodenough, 1953, pp. 33-39.

On the early evening of August 22, 1950, I was sitting with Henry, the native pastor from Nukuoro and Iohanis, when the question came up of what month this would be at Nukuoro. They said it was Maitiki, pointing out Sagittarius nearing

Straightway all went together to the beach, where Aükelé launched a canoe, and paddling out to deep water, poured the contents of the calabash onto the waves. And instantly up to the surface rose the great sunken canoe, with the ten who had been drowned standing alive in her.

Thus the brothers were again united, and the ten forgot their hatred of Aükelé, and when the rejoicings were ended, Queen Namaka had a great double-canoe built, with forty paddlers, and they all sailed back together to the land of Halani-the-Distant, where Chief Iku and his wife greeted them with a feast that lasted a whole moon. And after Iku met death, and his spirit departed to the Land-Under-the-Sea, Aükelé and his wife, Queen Namaka, all their lives ruled his land of Helani-the-Distant one year and her land of Lalaké the next, and knew not which they loved the better.

That is the tale, little brothers and sisters, of Aükelé and his wife Namaka. Now my words have run away. It is finished.

Flash-of-the-Paddle and Listener-to-the-Heavenly-Voice

YOU HAVE heard, my little brothers and sisters, of the Upper-Outer-Kingdom, that is past the rim of the sky-blue ocean and rests on the tops of the highest mountains like a canoe set on the points of spears. You shall hear more of that country in other stories, for many tales are told of it.

In the very ancient days — soon after our ancestors came from their first home in the west that is called Helani-the-Distant, the Land-that-Supports-the-Heavens, to this Hawaii of the dotted seas — that kingdom was ruled by a King who had eight daughters. In feature they were as like to one another as pandanus-seeds, and all were slim and delicate as flowers; but the youngest, whose name was Haka-Lani-Leo, which in the ancient tongue meant Listener-to-the-Heavenly-Voice, was so beautiful that her nurse covered her face with a veil to hide her loveliness.

There was but one way by which a man of the Lower Islands might reach the Upper-Outer-Kingdom. At one place, where its rim rested on a high peak that lifted from the shore of one of the islands, a gigantic vine drooped from it down the face of the mountain, and its tendrils had rooted in the Earth below. The shoots of the vine had grown as thick through as young trees, and wound about one another like the strands of a cable. To climb it was perilous, for the rain-clouds through which it passed made it wet and slippery, and above them a tribe of wild and fierce sea-eagles nested in it, which fell upon any trespassers with beaks and claws. Many heroes who tried to ascend the vine had lost their lives in the trying, and the ground in which it rooted was littered with their white bones.

When Listener-to-the-Heavenly-Voice was sixteen she learned of the great vine, and at once fell to coaxing her father to allow her to descend it and thus visit the world of the Lower Islands.

Said he, "My daughter, the folk of the lower world are not like us. Their voices are harsh and even their skins are a darker color. Their lands are as small as our tapa-coverlets, and from lying in the water are damp and dismal. Thou wouldst take no pleasure there."

She replied, "Nay, but I will promise that their lands shall not know the print of my foot. I wish only to see and observe them. I pray thee grant me this."

For long he withstood her, but so great was her desire that she fell sick with longing, and at length he summoned his Chief-Counselor, and said to him, "I must let my daughter have her will in this, or she will die. How may it best be managed, so that she will come to no harm?"

After pondering the matter, the Counselor said, "By thy magic make for her a floating island which will carry her where

she wills, and I myself will accompany her. She will soon tire of the plaything and be content to remain in thy kingdom."

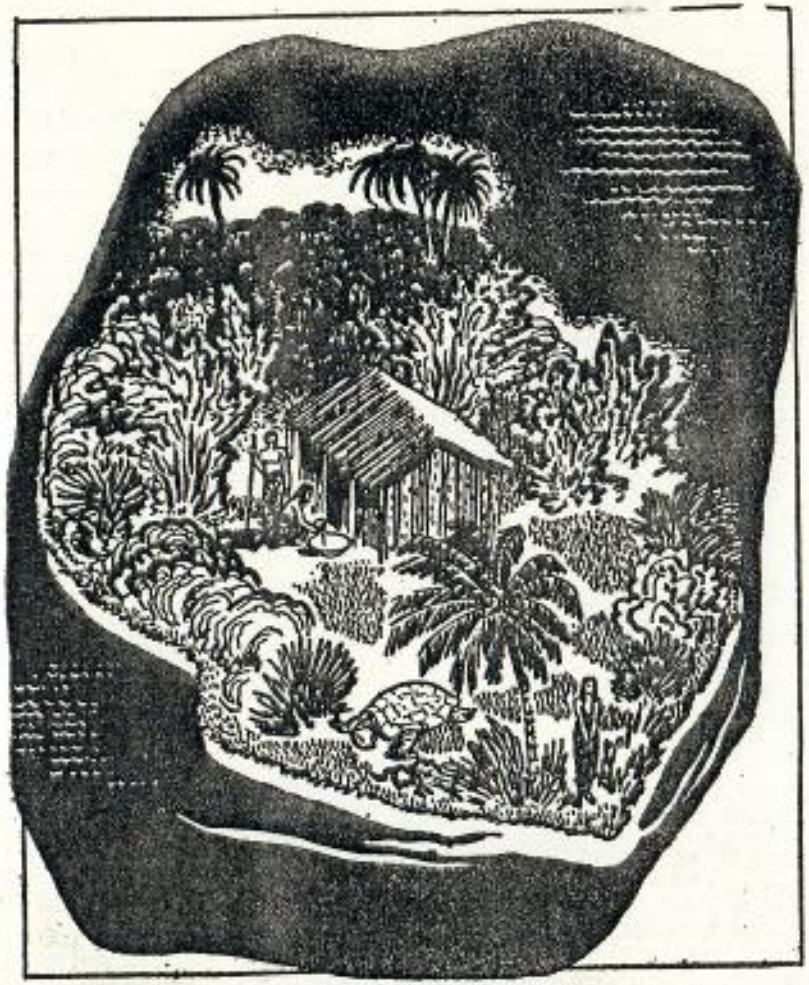
Accordingly the King made ready the island, and magicked it so that it would sail, like a great canoe, wherever she bade it. It had groves of flowering shade trees wherein roosted violet and emerald birds-of-paradise, with tails like yellow waterfalls. It had springs of sweet water and all kinds of fruits and vegetables. He gave her, also, attendants to care for her, with his Chief-Counselor to advise her, and for a companion a wise old sea-turtle that had served his ancestors for a hundred years. When all was ready she and her company were let down, by ropes twisted of coconut husk, through the clouds, by the way of the great vine, to the strand — whence rose the peak on which the rim of the Upper-Outer-Kingdom rested — to where the floating island lay waiting them.

At the last he gave her a small calabash containing a number of orange-colored seeds. Said he, "When it is thy wish to return, or if thou shouldst need me meanwhile, bring the island here and plant in its earth one of these palm-seeds. Water it with sweet water and repeat these words:

Sprout, seed!
Grow, tree!
Mount till I bid thee stop!

and the tree will rise from the ground. Take thy seat on its top, and it will lift thee with it, till its crest reaches the rim of our land."

He bade her farewell, and she set out on the floating island over the dotted sea. She visited many lands, large and small, watching their people fishing on the reefs, sailing their canoes, riding on the breakers with their surfboards, and to her delight leaping like shining arrows from the cliffs into the sea. Wherever she went folk stared in wonder at the magic island that



THE FLOATING ISLAND WAS READY.

moved of itself, and marveled at her beauty. But though they begged her to stay and sport with them, she remembered her promise to her father, and would not. Yet she longed to do so, for to her eyes the youths and maidens were handsome and their brown skins she thought as lovely as her own of lighter hue.

On one of the beaches she saw a youth at whom she could not gaze enough. He was a tall young Chief whose feather-cape and shell-fringed apron, as he walked on the sand, stood out amongst the rest. In riding the surfboard none could compete with him. When she bade her island sail away she sighed and looked after him till distance swallowed him.

Now the young Chief was known as Lapakahoë, which is to say Flash-of-the-Paddle. He was so called because of his skill with the canoe, and his paddle was named Water-Scatterer. His knees were tattooed in squares, circles, and crescents, and he was so handsome that there was no Chief's daughter in his land that did not long to have him for her husband. But he had smiled at none of them.

When he saw the maiden on the floating island his heart had flown out of his breast to her like a bird. After it had vanished he walked alone on the shore till dusk came, saying to himself, "Has she gone from me forever?" and when he thought that he might never again behold her, a cold chill numbed his bones. Till at last he said to himself, "I will follow her. If I find her, good. If not, death in the sea will be welcome."

So he took some food and a calabash of sweet water, and launching his canoe, sailed away in the night in the direction the island had gone.

At sunrise there was naught to be seen but the sea-waste, and that afternoon the sky purpled and blackened and a great storm arose, so that his canoe was well-nigh swamped by the

waves, and but for his strength and skill he would have been drowned. Two nights and a day he fought for his life, and in the next night he thought, "It is impossible that I find her. Why should I kill myself with bailing? This is my death-day. I will sink and leave my body to the sharks." So he ceased to labor and the water filled the canoe. But just as it went down, a towering wave flung it onto a sandy beach, dashing it to pieces, and after a struggle he saved himself, and lay down beyond the breakers more dead than alive.

Now when he awoke the tempest had tired itself out and white clouds curdled in the blue sky. As he saw the green groves standing in the sunlight, with their flame trees afire with bloom, wherein the birds were singing, he took heart. He found two pieces of wood, one hard and one soft, to make fire, and plucked a breadfruit and cooked it, for he had not eaten for two sun-rounds and the food he had brought had been lost with his canoe. And scarce had he tasted it when to his joy he beheld, running toward him, the maiden he had followed, and knew that he was on the floating island. She wore a short skirt of embroidered tapa-cloth ,with shell circlets on her ankles. Her flowing hair was adorned with a bunch of white ginger flowers, and around her neck was a garland of scarlet lehua blossoms.

Said she, "Aloha, youth! Love to thee. What dost thou here?"

He replied, "Love, indeed. As to what I do here, it was to find thee that I left mine own land the day before the beginning of the storm, which last night wrecked my canoe and nearly cost me my life." And at that she knew him for the youth she had seen, and the blood painted her cheeks, whilst her loveliness flowed over him like a wave.

Asked she, "Why hast thou made the fire?" He answered, "It was to cook this breadfruit to eat."

"Nay," she cried. "Burned thus, it will be a poison to thee! Come with me and I will give thee proper food."

"ALOHA, YOUTH! LOVE TO THEE."

He went with her some way through the trees to her house, which was very splendid, built of polished timbers, thatched with the feathers of the o-o and with lintels of birds' bones. There she seated him on mats braided of the tender stems of sedge-grass, and brought him a hardwood bowl heaped with kumara berries. "Here is food," she said. "My people have gone to gather more, but these will stay thy hunger."

"I thank thee," said he. "But wilt thou not let me cook some of the breadfruit?"

"Surely the sea has troubled thy mind!" she exclaimed. "To eat burned food is like to kill thee."

Said he, "Wait." And he went out and built an earth-oven beside the doorway, and heated stones, and when he had baked

a breadfruit, he began to eat it, whilst she watched him with fear. But seeing that the food in truth pleased him, when he set a piece before her and begged her to taste of it, she did so. Said she, "It is indeed good!"

He asked her, "Dost thou here eat naught but raw food?"

"Aye," she replied. "Never have I seen it eaten burned like this."

Then she told him who she was, and of her own land, the Upper-Outer-Kingdom, of which her father was ruler. In his turn he related how he had followed her, preferring a death in the sea to life without her. And her love, that had wakened at first glimpse of him on his island, came to full bloom.

So presently the Chief-Counselor found them, with both their faces shining.

Said he, when Flash-of-the-Paddle had told him of their love, "O Princess, it is no light thing for thee to take this man, High-Chief though he be in his own land, for thy husband. It is necessary that thou return to the Upper-Outer-Kingdom to ask permission of thy Royal father."

She replied, "He will not refuse me, no never!" And she cried aloud her command to the floating island to return to the place whence they had set out. Straightway a wind began to blow, before which it sped across the seas, and so at last come to rest beside the island of the great vine.

There, as her father had directed her, she planted in the ground one of the orange-colored seeds, and watered it with sweet water, and repeated over it the spell he had taught her:

"Sprout, seed!
Grow, tree!
Mount till I bid thee stop!"

And immediately the seed burst and sprouted, the shoot thrust from the ground, and the tree began to grow. She had scarce

time to seat herself on its crest when it rose into the air faster than one could throw a stone.

As it went higher and higher Listener-to-the-Heavenly-Voice felt terror seize her. She cried down to Flash-of-the-Paddle, "O my love! My hands are cold. My feet are stiff. My heart is chilled with fear!" And he cried in reply, "O Palm Tree! Let not the King's daughter fall!" And it folded its fronds about her and held her tight.

Thus she passed upward through the wet rain-clouds. Above them the wild sea-eagles did not attack her, and when she reached the Upper-Outer-Kingdom and bade the tree stop growing, it bent over and set her safely on its rim, after which it began to grow backward, its top descending as swiftly as it had arisen, till its magic was worked out and it remained an ordinary palm tree growing on the floating island.

She hastened to the Royal house, where the King said to her, "Welcome home again, my daughter. Here thou art and here thou shalt remain. And didst thou find anything worth seeing in the filthy Lower Islands?"

She replied, "O my father! I found there a man, a High-Chief and a warrior, whom I have brought back with me to be my husband. Give me thy consent."

Hearing, he frowned. "Naught but misfortune can come to thee from such a marriage!" he said. "Better that thou wed one of thine own land."

But she wept and besought him, crying, "If I may not wed him, then I will go husbandless to the end of my span." So, his heart having always been tender to her tears, he said, "Thou sayest thy youth is a High-Chief and a warrior. As such he should have the protection of Heaven. Let him come up alone by the vine, with only a knife in his girdle, and he shall have thee for wife."

This he said believing that Flash-of-the-Paddle must fail. For up to that time only one man of the Lower Islands had succeeded, and though he had reached the top with life yet in his bones, he had straightway died from the effort. But the Princess cried out with delight, saying, "Well and good! Let thy Chief-Counselor be at once informed, so that my husband-to-be may come to me without delay. For I starve for his kiss!"

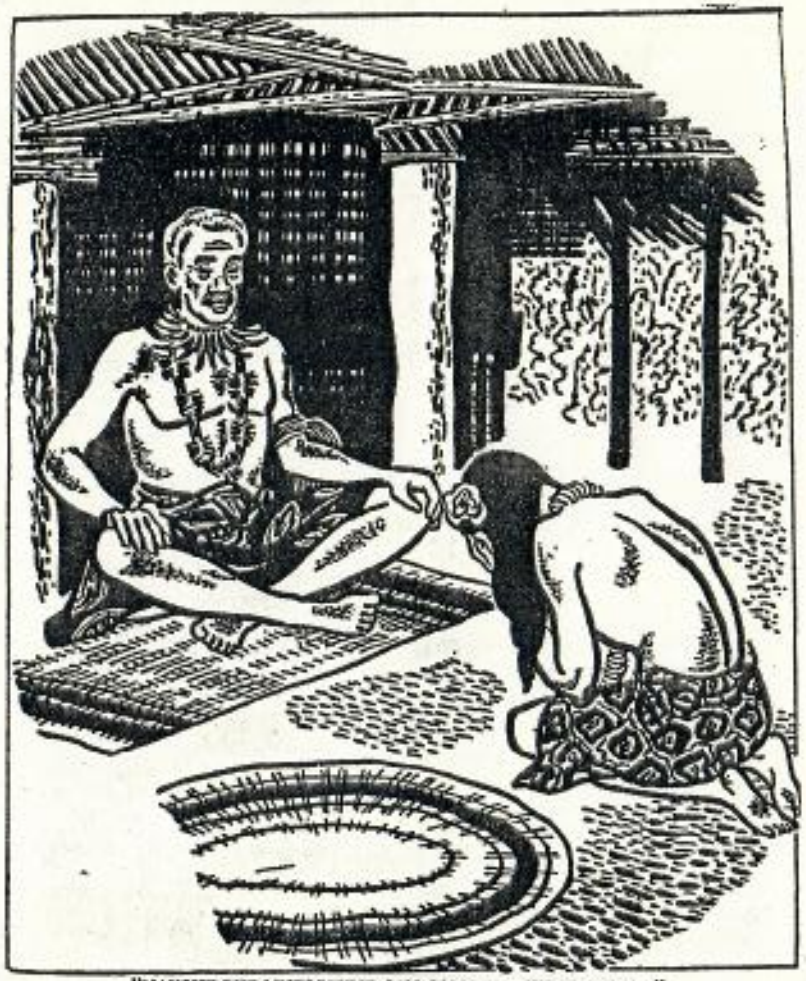
Now the King had a pet elepaïo-bird[1] which carried his messages, and when he summoned it, it flew into the room, puffing its green breast and ruffling its speckled feathers, and alighting on the mat, chirruped, "Ele*païo!* Ele*païo!* What is thy word, O Master?" The King gave it his message for the Chief-Counselor, and it flew from the doorway, circled thrice in air, and departed, whilst Listener-to-the-Heavenly-Voice called her servants and hastened to the top of the vine to watch for the coming of Flash-of-the-Paddle.

As for him, when the Chief-Counselor told him on the floating island what task lay before him, he said to himself, "Surely this is not too great a thing for me to do when my love waits at the end of it!" And he slept a round of the sun to gain strength, put taro root,[2] a calabash of sweet water, and a quantity of dry sand in a back-pack, and with his green-stone knife in his loincloth swam to the Place-of-the-Vine and began the ascent.

If I told all of the tale, my little brothers and sisters — how in the rain-clouds he sprinkled the sand on the slippery bark to give him hand-hold — how, clinging with one hand, he fought the fierce high-flying sea-eagles with the other, stabbing and slashing with his knife, till one by one he drove them off shrieking — how he bound himself to the vine with his

1 The Hawaiian fly-catcher.

2 A variety of the plant commonly called "elephant's ear." The pounded root, mixed with water and fermented, makes the food called poi.



"NAUGHT BUT MISFORTUNE CAN COME OF THIS MARRIAGE."

loincloth when he rested — and how, in order that his food and drink might suffice, he took but one mouthful of taro root and a single sip of water each day — if I told you all these things, the string of ku-kui nuts[8] would be burned out before I came to end. But at last, worn and spent, he came to the rim of the Upper-Outer-Kingdom, where Listener-to-the-Heavenly-Voice waited for him.

There they embraced one another, and when he had refreshed himself, they went together to the Royal house, where the King said to him, "Well, thou hast come up by the vine, and my promise is my promise."

He commanded that the wedding feast be prepared without delay, at which all ate cooked food and found it good, and that night Flash-of-the-Paddle and Listener-to-the-Heavenly Voice were married, and began living together in all content. So a year rolled its course, in such happiness that he forgot his old home in the Lower Islands, his parents, his sisters, and the friends of his village.

But at the end of this time he began to remember and to long for a sight of their faces. He said to himself, "Doubtless they think me drowned in the storm, and all this while have been mourning for me!" The thought remained in his mind, and often he would sit in sadness with tears in his eyes.

His wife, Listener-to-the-Heavenly-Voice, noted this, and would ask him, "Why dost thou sit silent, with dull grief behind thine eyelids? Dost thou no longer love me?" And he would answer, "Nay, I love thee more each sun-round." But at last he said to her, "Though I have thee and thy love, yet I pine for a glimpse of my old home, where I was High-Chief, and I long to comfort my parents and my sisters, who think me

[8] Candle tree. Its heart-shaped nuts, strung on the thin stalk of a coconut leaf, are burned for light, each nut burning from two to three minutes.

dead. Though a year has gone by, they must still mourn for me."

Then, sighing, she said, "Aü-e! If I hold thee here against thy will, I shall lose thy love! Though parting slay me, it is better that thou go, and ease the burning of thy heart with sight of them." And she went to her father and told him.

Said he, "Did I not tell thee that naught but unhappiness could come to thee from thy marriage to him? Well, if it must be so, I will send him by my sea-turtle, which went with thee on the floating island, and well knows the ways of the lower seas. For it is the wisest and swiftest of all my creatures."

So the turtle was made ready. A platform was fitted to its back, with hampers containing all things necessary, and it was lowered to the strand below. And she bade Flash-of-the-Paddle farewell.

Said she to him, as he held her in his arms, "Promise me two things: that thou wilt on no account remain longer than four tens of days, and that thou wilt not lose thy love for me."

He answered, "I shall stay there but half that time, and how can I lose my love for thee, my most precious one? Sooner shall the bright canoe-guiding star fall into the sea!"

"I take thy promise," she said, then, "and if thou dost forget me, I swear by all our gods that I will kill thee."

At that he laughed, saying, "If I forget thee, I will help thee do it."

At the last the King said to him, "My son, remember my final counsel, and fasten it, as with fish-hooks, to thy memory. If thou dost forget it evil will befall thee. When the turtle starts, bind a strip of tapa-cloth over thine eyes. Thou wilt not reach thine own island till the sun has gone thrice across the sky. During that time remove not the cloth, even to eat and drink, till it sets thee on the shore, where it will wait for thee till thy visit is ended. And do thou return here in the same manner."

SO FLASH-OF-THE-PADDLE STARTED HIS VOYAGE.

So Flash-of-the-Paddle started on his voyage on the back of the huge sea-turtle, with the tapa-cloth bound over his eyes. The turtle-tribe have no language, so that there was no speech between them. But the sharks called to him, "Ho, traveler! Why dost thou ride blindfold? Didst thou ever see the sea and the sky more beautiful?" And when he replied, "I have naught to say to you," they were angered, and swam full-tilt against the turtle, battering it with their snub-noses and thrusting it beneath the waves, till he was well-nigh drowned. Once he laid his hand on the tapa-cloth, thinking he must see to save himself, but remembered the King's warning in time.

The porpoises, too, gamboled about him, leaping from the water, and crying, "Dolt! Take off thy bandage. For the land is in sight. Perchance it is thine own home." And the wild-crying sea-birds swooped down, clawing at his head, and

screaming, "A blind man! A blind man! Drive with your beaks, brothers, for he cannot see us!" But through all he kept his eyes covered.

And at last, on the morning of the fourth day, he felt the turtle clamber up on a beach, and snatching off the tapa-cloth, he beheld the remembered strand of his island and his own village near at hand.

Thus he came to his friends, who welcomed him as one returned from the dead, whilst his parents and his sisters wept over him with relief.

So, amidst the feasting and rejoicing, he forgot the sea-turtle, and when on the second day he ran to the beach, lo, he found only its huge shell, for a party of fishermen had come upon it and had speared it and cut up its flesh and taken it away for food. The wise old sea-turtle, who alone knew the sea-roads, was dead!

Thereat he wept and wrung his hands, crying, "Alas! Ye have slain my friend, who brought me hither! What now shall I do? How shall I find my way back to my wife?" And he could not be comforted.

At last the fishermen said to him, "We grieve for thee. But what we did was done in ignorance. In atonement we will not eat the flesh, but will burn it on the altar of our temple, as a sacrifice to our gods. And we will help thee bury the shell and set a mound over it in remembrance."

Accordingly, when they had burned the flesh, they dug a grave on the beach for the great shell. Five days they spent in the labor, digging it deeper than any grave had been dug before; and therein they laid the shell, wrapped in many folds of tapa-cloth, and set up a mound of stones over it.

Now in the Upper-Outer-Kingdom, Listener-to-the-Heavenly-Voice waited for the return of Flash-of-the-Paddle. When the

two tens of days had gone by, she said to her father, "His people have persuaded him to stay the full time." But when the four tens of days had passed and he did not come, she said, "My love means less to him than his old home. He has forgotten me, and I shall never see him again!"

Then the King, after pondering deeply, said, "Give me a garment that he has worn and one of thine own, and leave me till I send for thee."

She brought them, and he shut himself away from all for a day and a night, when he summoned her, and said he, "There is a certain magic, which has come down to me from my ancestors, and I have set it to work on thee and on thy husband. By its virtue, from this day, age shall touch neither of you till you two meet again, both of you remaining as you are now, in every line and feature. If thou art wrong, and some accident has prevented his return, you shall still live out your two lives together. If thou art right and he has indeed forgotten thee, then thou wilt be able to make good thine oath and kill him."

From that day, neither Listener-to-the-Heavenly-Voice, in the Upper-Outer-Kingdom, nor Flash-of-the-Paddle, on his faraway island, grew older. The years gathered themselves together, the King died and the magic that had made the floating island died with him. His son reigned in his stead, and died, and *his* son ruled, yet Listener-to-the-Heavenly-Voice remained as youthful and lovely as ever. And on Flash-of-the-Paddle's island, also, three generations passed. His parents died, his sisters grew old, and their children and their children's children, whilst he remained the handsome youth that he had been. The mound over the sea-turtle's grave on the seashore remained, and its story had become a legend.

Now the seven sisters of Listener-to-the-Heavenly-Voice in time were wedded and daughters were born to them, one to

THE SEVEN SISTERS OF LISTENER-TO-THE-HEAVENLY-VOICE.

each. These daughters married in their turn, and each had a daughter, who, when she grew to maidenhood, was as like to her mother as one pandanus-seed to another. And all were so like their great-aunt, Listener-to-the-Heavenly-Voice, that any one of them might well have been taken for her.

With the years the great vine had grown more thick and strong, so that men passed more easily up and down, whilst the folk of the Upper-Outer-Kingdom, when they were so minded, went in canoes among the Lower Islands and learned the sea-ways. And it befell at last that Listener-to-the-Heavenly-Voice said to herself, "My lonely life has been long enough. It is time that I found him who is my husband, and carried out my vow to kill him."

She had a great seagoing double-canoe built, that was painted red, with sails and cordage of red, and with its forty paddlers in red cloaks — the canoe of a Royal Princess — and taking her seven great-nieces with her, in a Moon-of-the-Pomegranate, sailed forth on the sky-blue ocean.

She remembered the way the floating island had gone long ago, and she bade the helmsman follow it. So at length, on a morning, they came to the island where Flash-of-the-Paddle dwelt. He seldom spoke, spending his days sitting on a great

rock on the shore, gazing out across the sea, and because he did not age or die, folk regarded him with fear and awe.

When the great canoe came to the landing-place, all the people thronged to see it, amazed at its splendor and at the beauty of the eight maidens, wearing Royal feather-cloaks, who sat on its platform — for they could not guess that one of them, beneath whose robe was hidden a green-stone dagger with a point as sharp as a needle, was many years older than the rest.

Listener-to-the-Heavenly-Voice saw the figure sitting on the rock beyond the crowding people, and her heart stopped beating. She beckoned to an old man, and asked him, "Who is the man yonder?"

He replied, "My Princess, we call him the Youth, because he does not grow old like us. As he looks now, so he looked in the time of my great-grandfather."

"Has he always lived in this village?" she asked.

"Aye," he answered, "except that during one year he dwelt in another land, from whence, our legend says, he came again riding on a sea-turtle."

She was obliged to pause a moment to still her trembling. Then she said, "How many wives and children has he had?"

"None," he told her. "He has never married."

"How long a time!" she said. "Did he so love this place that he never wished to return to that country from whence the turtle brought him?"

"Not so," he replied. "He would have done so speedily, but when he was not by it, the turtle was speared by fishermen, who had not known that it had carried him. And the turtle alone knew the sea-road. Such is the story. And it is told that the fishermen, sorrowing for their deed, gave the turtle's flesh for an offering in the temple, nor did he make fish-hooks of its shell, but buried it here on the shore with honor."

"Where is the place of its burial?" she asked.

He replied, "The heap of stones by the cliff, there, is its mark."

Then she said to the people, "I am minded to see if your legend is true. Fetch tools and dig up the shell." And the men ran and brought mattocks and dug. They labored long, since the grave had been very deep, and it was noon before they came to the stone-lined bottom, where lay the shell in its rotted tapa-cloth. And they brought it up and laid it before her.

Said she, "The tale is a true one. The turtle was known to me, and I recognize its markings. For my canoe is from the land thy Youth visited in his year of absence from this place."

Now all this time, as was his wont, Flash-of-the-Paddle had sat moveless, paying no heed to those about him, with his chin in his hand, gazing seaward. And as she looked at him, she thought, "He was not false to me! It was fate, not his own will, that kept him here! But what if, in all the years, he has indeed forgotten me? For if so, I am held by my oath to kill him."

At last she said to the old man, "I pray thee, go to him and say that his wife, Listener-to-the-Heavenly-Voice, is here." And in wonder he did so.

When he heard the words of the old man, Flash-of-the-Paddle cried a loud cry, and leaping up, ran to the canoe and stood gazing at the eight, who were as like one to another as pandanus-seeds.

And to see the likeness between them, his voice caught in his throat. He thought, "O my love! Has youth remained for thee also, and thy seven sisters? But which of the eight art thou? For I remember thy oath, and if I mistake, I die! Have I found thee only to lose thee, and my life also?" And he knew not what to do.

Listener-to-the-Heavenly-Voice had instructed her nieces how

to act, and now she signed to the eldest, who rose, and stepping from the canoe, drew near to him. Asked she, "Dost thou not know me?" But gazing on her, he said, "Nay, thou art not she! Thy neck is not as lovely as was hers!"

She returned to her place with eyes downcast, and another came, asking him, "Am I less beautiful than when thou didst leave me?" But said he, "Her hair was curling like the tendrils of the jessamine vine. Thine has less sheen!" And she, too, seated herself again in the canoe.

A third came, and his arms were outstretched to embrace her, but looking into her eyes, he saw not the deep dark glow of the eyes of his love, and he turned away. When a fourth approached him, her knee had not the dimple he had loved in Listener-to-the-Heavenly-Voice, and he shook his head; and to

HE OPENED HIS ARMS TO HER.

a fifth he said, "Nay, thy whole body has not the beauty of one of her eyelids!" And so with all the seven: each in some feature lacked something of the perfection he remembered.

At the last the real Listener-to-the-Heavenly-Voice rose and came from the canoe and faced him. And he saw in her his lost love, as he had known her three long lifetimes before, in the unforgotten years, in all her loveliness, as he had dreamed it every day since then. And tears ran down his cheeks. He opened his arms and she came into them, whilst the green-stone dagger beneath her robe fell rattling on the pebbles at her feet.

So, my little brothers and sisters, Flash-of-the-Paddle found his wife again!

The people of the island made for them a great feast which lasted three days, after which he went with her company aboard the red canoe, which carried them back to the Upper-Outer-Kingdom, where they lived out their lives in happiness. They took with them the shell of the wise old sea-turtle, which is still treasured by their descendants, and their story has been told in every generation since that time.

that Kapa'ihi?" the chief asked. His men did not know. They paddled closer.

"Yes, that is my friend!" The chief was weeping as he thought of the wrong he had done this faithful man. "I will go to him."

The chief waded ashore and stood before his friend. He heard Kapa'ihi weeping. In a low voice the chief chanted:

"We two tramped together.
Lonely and deserted, we tramped the forest."

Kapa'ihi raised his head. The chief took him in his arms and touched his nose in love. "I have done wrong," he said. "Come back with me. Never again shall I believe evil of my dear companion."

Together they built an *ahu*, or pile of stones, and the chief said, "Let all who see this *ahu* remember the lasting love between two friends."

From "Hawaiian Antiquities" by Fornander

The Turtle in the Sweet-Potato Patch

On Kauai lived an old man and his wife. Their house was well thatched and furnished with mats and *kapa*, their garden was green and good, nearby on the mountainside was a spring of clear, cold water, and the sea was full of fish. The old people seemed to have all that they needed, and yet their hearts were empty. "We have much," the old man said, "and no child to share it with."

"Yes," his wife answered, "and there will be no one to care for us when we are old."

One morning she waked early and went into the garden for she liked to look at the strong sweet-potato vines. She could almost see them growing. This morning she saw something else—a potato had been picked. She took it up to look at it and saw the marks of little gnawing teeth. "Husband!" she called, "There's a turtle in our garden! It has been gnawing our potato." She hunted, and her husband came to help her hunt.

She saw him bending down. "Yes, a turtle," he said in a low voice, "and here she is."

The woman went to look. There, rolled into a ball for warmth, was a child—a little girl. She was thin, pale, and covered with mud. Her *pa'u* was torn and dirty. In one hand, thin as a bird's claw, she still held a bit of sweet potato. "The gods have sent her to us," the old man whispered, and they carried her to the house. They gave her *poi* which she ate hungrily.

After many days she learned to love the old couple. She called them grandmother and grandfather. They called her Honu—Turtle—and watched her grow plump and beautiful. She was a gentle, quiet child. The neighbor children liked her. She swam with them in mountain pools or went down to the shore for crabs and shellfish. She helped her grandmother at *kapa*-making and carried water from the spring. But most of all she liked to go with the old woman to hunt for herbs or dyes for *kapa*. She grew to love the woods and mountains and soon was going to the forest by herself. All day she would stay away and, when darkness fell, she came back to the house wearing a *maile* lei and red *lehua* flowers in her hair. Her face was very happy.

"What did you do today?" her old people would ask, and Honu answered, "I was playing with my friends." The grandparents exchanged a glance for they knew there was no one in the forest but the *menehune*. These were Honu's "friends."

"She is both kind and fearless," said the grandfather. "I've seen her feed a baby bird and hold a lizard in her hand. Such a one the little people like. She seems to

know them well, yet I might tramp the forest all day long and never see a *menehune*."

"The little people do not trust us big Hawaiians," the grandmother replied, "but a quiet child can be their friend."

The months and years went by and Honu grew. Her grandparents wondered at her wisdom. "Do not go to the forest today for roots," she would advise her grandfather. "I think that it will rain." The old man saw no sign of rain, but followed Honu's words.

Later, when rain poured down, the grandparents looked into each other's eyes. "She is very wise," they whispered.

Another day she told her grandmother, "Our neighbor up the trail is sick. We must take herbs to her." The grandmother took healing herbs and found the neighbor sick indeed.

The old people were happy as they watched Honu grow. "The gods have sent her," they said often. As she became a woman they thought about her marriage. "Where is a husband worthy of her?" they asked each other. "We do not want a man from far away to take her from us." They were troubled, but the gods still cared for Honu.

One day she said, "Let us go to the upland to dig roots, for tomorrow will bring a hungry stranger." So they dug *taro* and *'awa* roots. The grandfather heated the *imu* while the grandmother and Honu went to the

beach for seaweed and for fish. By night much food was ready.

At dawn a shout awakened them. A young man stood outside their sleeping house. "I'm lost," he said, "I have wandered all night long and am very glad to find a house."

The old man set food before him. "We expected you," he answered, "for our granddaughter told us to make ready for a stranger."

The young man looked up from his food. "Then she is wise as well as beautiful," he said. He went on eating thoughtfully, then paused again. "She is your child?" he asked, "your granddaughter?"

"Yes."

"When I saw her in the golden light of dawn my love awakened. My father is overseer of this district. He sent me here to see the fish ponds and the gardens—to see that all men do their work and prosper. Somehow I lost my way. The gods guided me and I found your grandchild. I can make a good home for her. She will be near to you grandparents and can visit you, or you can stay with us. Will you let me marry her?"

The old man called his wife and told her what the stranger said. "Ask her," the grandmother made answer. "It is for her to say. She went to the spring for water," and the old woman pointed up the trail.

The young man followed her direction. In a *lehua* grove he met the girl, more lovely than before, fragrant with *maile* and gay with red *lehua*. He took her water

gourds, and she smiled up at him. Slowly they walked together. When they reached the house the young man asked the grandfather, "May I bring my family? I want them to know Honu and you, her grandparents."

He left the old folks busy making plans. "We must prepare a marriage feast," the old man said. "I shall dig many roots while you two go to the beach for fish and seaweed."

"Where shall our guests eat?" the grandmother was asking. "And where sleep? Our houses are so small! And Honu will need many things—bowls, mats, and kapa. Why did we not make ready for her marriage long ago?"

"O my grandparents," Honu said, "do not be anxious, for all things will be made ready." That day she went into the forest. At night she told them, "Do not be disturbed by noises you may hear. Lie still and sleep till morning."

All night long strange noises sounded outside the sleeping house, but the old couple lay quiet on their mats. At daylight all was still, and the old man pushed open the door board. "Come!" he called in an excited whisper. "Our Honu's friends have been here."

All three went out. There stood two large shelters thatched with *ti*. The old folks walked around, looking and touching, filled with wonder, while Honu smiled a quiet smile as she started for the spring.

Later she found the grandparents still busy with their

plans. "We must get food," the grandfather was saying, "roots and sea food for our guests."

"And bowls, mats, and *kapa* for our Honu," the grandmother repeated.

"O grandparents," Honu said once more, "do not be anxious. Tonight my friends will come again. Lie still and sleep till morning."

The old couple did lie still, but they were listening. They heard the noises of stone tools on wood—chopping, carving, smoothing. It seemed as if four hundred little men were working in the moonlight. They longed to see, but Honu had said, "Lie still," and each one thought, "If we should peep, the *menehune* would be sure to know. They would leave and never would return." So the two lay quiet.

In the morning they found bowls and platters ready for the feast and ready for Honu's home. Beautifully shaped and smoothly finished, each bowl would have taken a Hawaiian workman many hours. Yet in one night they had all been made by Honu's little friends. The old people rejoiced.

Next night they slept in spite of the strange noises. When morning came they found wood piled—much wood, ready to heat the *imu*. That night the smell of burning wood came to them, and they knew the *menehune* were cooking food. One night more and the sea food was prepared. Sweet potatoes, *poi*, fish, seaweed and much else! The old couple walked about looking at well-filled bowls and sniffing the good smells. And so

much food! "Has the overseer so large a family?" they said to Honu. "Your friends have made ready food for a great company."

The girl's eyes turned toward the ocean. "Many are coming," she made answer. "There come the small canoes belonging to the overseer. Let us go down to welcome all his family."

They started down. "Two small canoes," the grandfather remarked. "These people cannot eat so great a feast."

"Others are coming," Honu said. "My family are coming from Hawaii." They looked at her in wonder, but she said no more.

They reached the shore just as the two canoes were beached. The son of the overseer came eagerly to Honu, then brought his family. The overseer, a tall and handsome man, looked at her. "My son has chosen well," he said. "We have built houses for you. Bring your old people and let us give the marriage feast for you."

"All things are ready here," the grandfather replied. "Come to our upland home."

But Honu's eyes turned seaward. The others looked. A double canoe was coming, its sail the red sail of a chief. The overseer's family stared in wonder, for over Honu mist had gathered and the mist glowed red. Above, a rainbow formed, reaching from Honu out to the canoe.

The red sail was let down, and the canoe carried up

the beach. A man came toward them, a man of chiefly bearing. A chiefess followed. They came to Honu under the rainbow's end, their eyes streaming with tears. The man spoke to her in a voice of sorrow:

"My lei! My flower!
You were brought here to a land of
strangers.
You have wandered homeless!
You have suffered!
O my daughter,
How is it with you this day?"

Then Honu answered him:

"Not homeless, O my father!
Nor suffering!
I have grandfather and grandmother
Who have given me loving care.
They have fed and taught their Honu.
Here, now, behold my husband.
This is our marriage day.
The little people of forest and mountain
Have made ready for you.
The feast is spread.
O my father, O my mother,
Welcome to our marriage feast!"

The old couple and the family of the overseer had watched and listened, puzzled and fearful. Had these chiefly folk come to take Honu from them? The father must have seen their wonder. Now he turned to them and spoke. "Our home is on Hawaii," he began. "There

this child was born. Eternal Fire for Pele was her name. Her mother's older sister begged to rear this child and sailed away with her. A little while ago friends came to us from Kauai. 'Tell us of our daughter,' we said to them. 'Have you not heard?' they answered in surprise. 'That woman took no care of her, but let her wander here and there, eating and sleeping where she could. For long there's been no word of her. We think the child is dead.' "

"Our grief was bitter, but that night my guardian spirit spoke to me. 'Be not afraid,' he said. 'Sail for Kauai, and I shall guide you. You will see a rainbow arching from shore to sea. Under that rainbow you will find Eternal Fire.' "

The father turned again to Honu. "O my flower," he said, "when I think of those years, tears come into my eyes. To think that my dear child was hungry and uncared-for!"

"I can remember those days a little," Turtle said. "They were bad days. Let no child of my family ever be given to an older sister or brother of her parents. But those bad days are like a dream. Clear in my memory are the long years of happiness with my dear grandparents. When you are old, grandmother and grandfather, come to my home. My husband and I shall care for you as you cared for your Honu."

At a gesture from the chiefess, her servants brought gifts from the canoe—rolls of mats and *kapa*. "The women of our family all gathered," the chiefess said, "to make these things for the child so cruelly deserted."

It was a happy party that climbed the trail. They wondered at the *ti*-thatched houses and at the feast prepared. "Thanks to the gods," the father said, "who gave Eternal Fire kind grandparents and *menehune* friends."

Told by Mary Kawena Pukui and previously published in "Folk tales from Hawaii" by Green. This is a story of Mrs. Pukui's family who, in remembrance of Honu's words, never give a child into the keeping of an older sister or brother of its parents.

Legends of KAUAI

but the round coral files are too brittle to begin a hole in bone, and the perforations in the two specimens which illustrate this stage of manufacture do not appear to have been made in that manner. It seems that the implement used, probably a basalt awl, had only been given a series of half-turns, for the holes are not clean-cut, there being two small ridges opposite one another. By taking a basalt awl and holding it between the thumb and index finger, it is comparatively easy to drill such a hole in the bone. The series of half-turns used leaves the two inner ridges, indicating that this may have been the technique employed. After the perforation was made, round coral files could then have been used to advantage. Though pump drills were known to the Hawaiians, none were found at this Kahoolawe shrine.

5. After the rough shaping, the point was apparently completed first, the shank last. For finishing work, the many small files with numerous faces are best suited and were probably used.

Foreign Material

Very little exotic material was found at the shrine, an excellent indication of its occupation in prehistoric times. Two nails, one bent in the shape of a fishhook, one iron spike, a small piece of blue cotton cloth, a piece of heavy canvas (Bundle 28, page 39), and two dried leaves which apparently are tobacco (Bundles 22 and 23) were the only evidences of foreign influence. According to Mr. Stokes this material was found near the surface. A large tack and a battery top associated with the collection probably did not come from the shrine, for Mr. Stokes does not list them with the foreign material found in 1913.

DESCRIPTION OF COLLECTION

Introduction

The collection comprises materials brought from Kamohio shrine and the island in general in 1913 by Mr. Stokes and those collected by the author and Mr. Bryan in 1931. All of the objects are typically Hawaiian, and though the collection is not representative of Hawaiian culture, it gives without doubt a fair picture of the materials used by the former inhabitants of Kahoolawe. Comparatively few people have ever visited the island, and little collecting has been done there.

Fishing Apparatus

HOOKS

Completed fishhooks found at Kamohio shrine comprise both simple and composite types. Simple or solid hooks are those cut from one piece of material. Composite hooks are made of two or more parts bound together. The material is, almost without exception, of bone, usually human, though wood, shell, and tortoise hooks are also found. The terminology here employed is indicated in figure 4, *a*.

J. Gilbert 1933

Simple hooks of bone are illustrated in figure 4, *a*. From fragments found, some hooks may have been 3.5 inches or more long. The upper end of the shank usually had either a small projection (fig. 4, *a*, *1*) or a notch (fig. 4, *a*, *2*) to facilitate securing a line. There is surprisingly little variation in knobs. The shanks are oval to flat in cross section, becoming enlarged at the bend. In spite of this precaution the break usually occurred at the bend.

The most common point is sketched in figure 4, *a*, *5*. Nearly all of the points of the simple hooks are without barbs, but many points are curved in toward the shank to so great a degree (fig. 4, *a*, *2*, *4*) that a barb would hardly be of value. The barb of a large broken hook is shown in figure 4, *b*, *2*, and another broken specimen with a peculiar point is shown in figure 4, *b*, *3*.

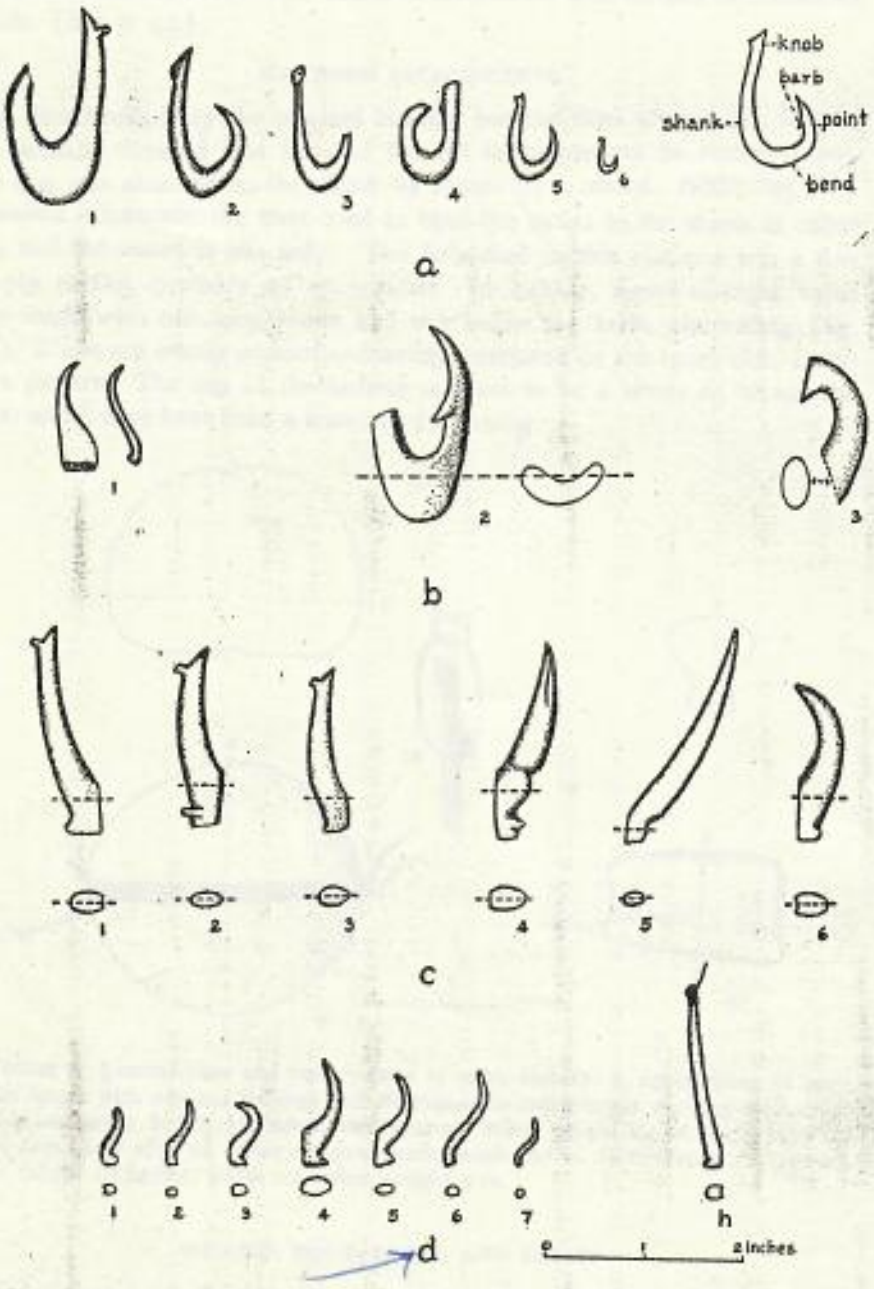
Composite hooks are described in two groups, medium-sized or large hooks, and exceptionally small hooks. None of the composite type were found intact, but enough shanks and points remain to reconstruct a picture of a complete hook.

In the larger group a line was attached to the hook by means of a projection in the knob, similar to the simple hooks (fig. 4, *c*, *1-3*). The shanks and points were bound together at the bend. The surfaces of attachment of either the shank or point were grooved, pointed or tongued, or flat (cross sections, fig. 4, *c*). None of the points or shanks has a perforation, the binding being secured by notches and projections on both the shanks and points. Hawaiian composite hooks in the Museum are bound together by fibers, after a small, flat piece of wood has been placed on both sides of the band at the juncture of the point and shank. All the points of these composite hooks are without barbs.

The smaller composite hooks are apparently peculiar to Kahoolawe (fig. 4, *d*). Nothing like them is to be found in the Museum collection, nor, so far as I know, has anything similar been figured or described from Polynesia. There are 26 points, all of bone, with one exception, which is of wood. They average a little less than an inch in maximum length (fig. 4, *d*) and are without barbs. Their surfaces of attachment are grooved, flat, and rounded (fig. 4, *d*, *1-7*). In this and other respects they resemble the large points, differing only in that they are smaller and of poorer workmanship. Only one shank remains of the type apparently used with these points (fig. 4, *d*, *h*). It is of wood and is grooved at the place of attachment, fitting perfectly with a number of the points. The knob is slightly grooved, sufficient to secure the snood lashing fiber (*ka'a*), a part of which remains. It seems probable that these bone points were used with wooden shanks, now decayed.

Two peculiar hooks are illustrated in figure 5, *b*, *c*. The first (fig. 5, *b*) appears to be made from the scale of a fish, for it is transparent and of paper-like thinness. It has no groove or knob for attachment, and it is difficult

FIGURE 4. Fishhooks. *a*, simple types: 1, common form (point broken) showing projection for securing line to shank; 2, common form with notched knob; 3, form with unique knob; 4, hook with unusual projection on inner side of shank (broken knob); 5, average type of hook; 6, one of the smallest hooks. *b*, unfinished and less common types of points: 1, unfinished and finished composite point of a small hook; 2, unusually large, simple hook, with barb; 3, peculiar type of point. *c*, outline and cross section of composite hooks: 1, shank with rabbet at bend for attaching tongued point; 2, shank with tongued attachment and projection for lashing; 3, shank with tongue for attachment; 4, point with flat face for attachment and two notches for lashings; 5, long, flat point, portion of lower end at place of attachment probably broken; 6, point with grooved surface for attachment and unusually curved point. *d*, composite hooks of smaller type: 1-7, bone points with cross sections indicating surfaces of attachment to shank; 4, the largest; 7, the smallest; *h*, wood shank showing attachment of line and groove at surface of attachment to point.


knob
barb
shank
point
bend
a
b
c
d
h
0 1 2 inches

to understand how it could have been used. The other hook (fig. 5, *c*) has been made from a fish-fin ray that has been bent artificially. There is a well-defined groove on the inner curve running from the knob to the point.

Six turtle shell hooks, small, averaging 0.5 inch, have the same characteristics as the bone hooks in figure 4, *a*, and are practically identical with the hook of figure 4, *a*, *6*. A number of pieces of turtle shell, cut into ovals or rectangles, were probably to have been used for making hooks.

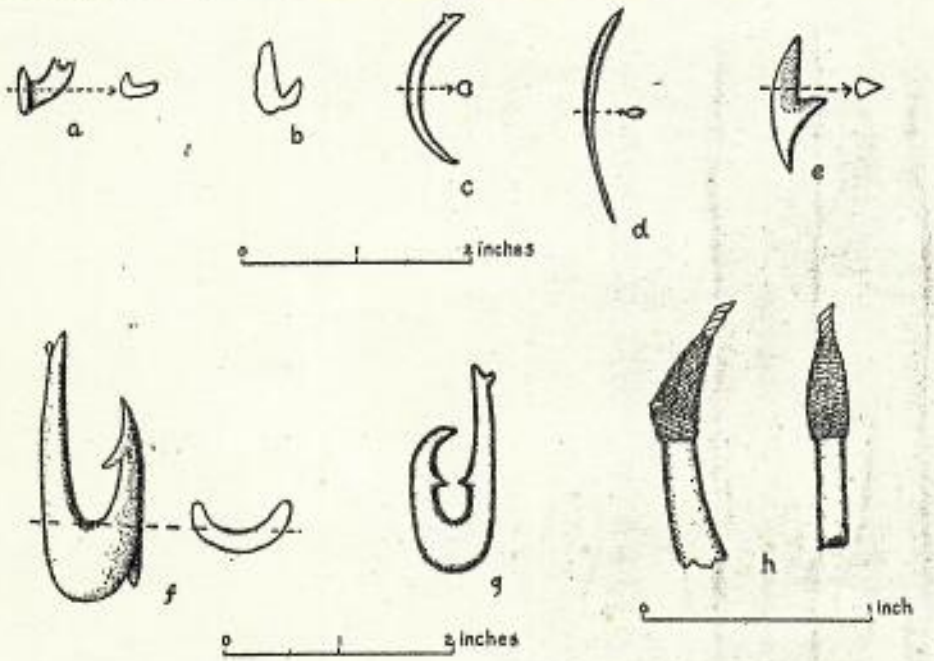


FIGURE 5. Miscellaneous bone fishhooks: *a*, probable portion of point of hook, which slightly resembles trolling points; *b*, fish scale resembling crude hook; *c*, ray of fish fin formed into hook; *d*, curved and pointed fragment of rib which may have been a gorge; *e*, bone fragment carefully shaped, possibly a gorge; *f*, unusually curved hook (indicated by cross section) with inner and outer barbs on point; *g*, hook with unusual inner projection on shank; *h*, detail of lashing snood to shank, showing pattern formed by figure-of-eight turns.

Four perfect fishhooks in the Bishop Museum collection, of bone, undoubtedly human, are of the simple or solid type. A projection on the shank serves as a means of lashing. Two of the hooks have barbs on the outer side of the shank (fig. 5, *f*). The point of the hook not figured has no inner barb and is even more curved than that in figure 5, *g*. The outer barb is closer to the point than in figure 5, *f*. The third hook resembles that in figure 4, *a*, *1*, but with the point complete. The fourth has not only an inner barb on the point but a projection on the inner side of the shank (fig. 5, *g*).

Two additional hooks were found in association with burials in Hakioawa Gulch. (See p. 44.)

FISHHOOK ATTACHMENTS

A few hooks have the original lashing, but the lines are so old, fragile, and partially decayed that little of the old technique can be reconstructed. The line was attached to the shank by means of a snood. According to a Hawaiian informant, the fiber used to bind the snood to the shank is called *ka'a*, and the snood is *aho milo*. The *ka'a* used in this instance was a fine two-ply thread, probably of *olona* fiber. In lashing, figure-of-eight turns were made with one loop above and one below the knob, alternating (fig. 5, *h*). These are evenly crossed and neatly interlaced on the inner side, forming a pattern. The top of the lashing appears to be a series of transverse turns, which may have been a manner of finishing.

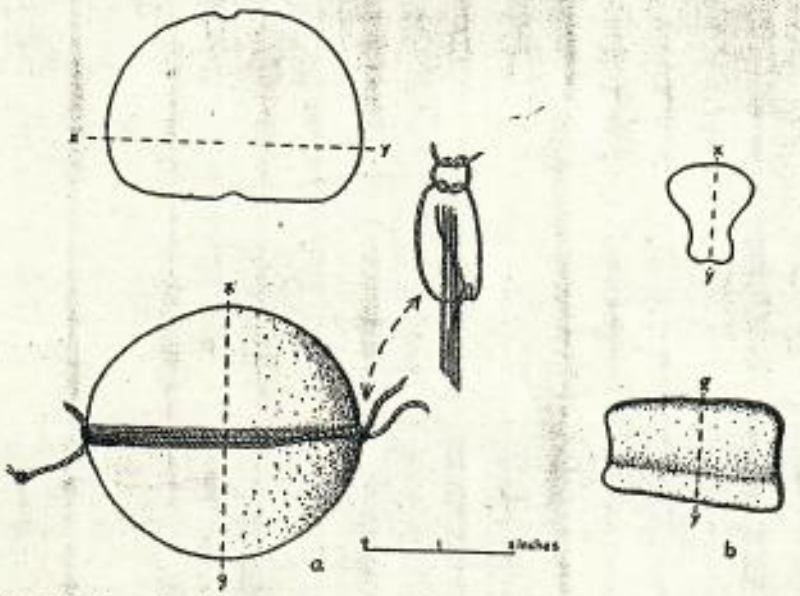
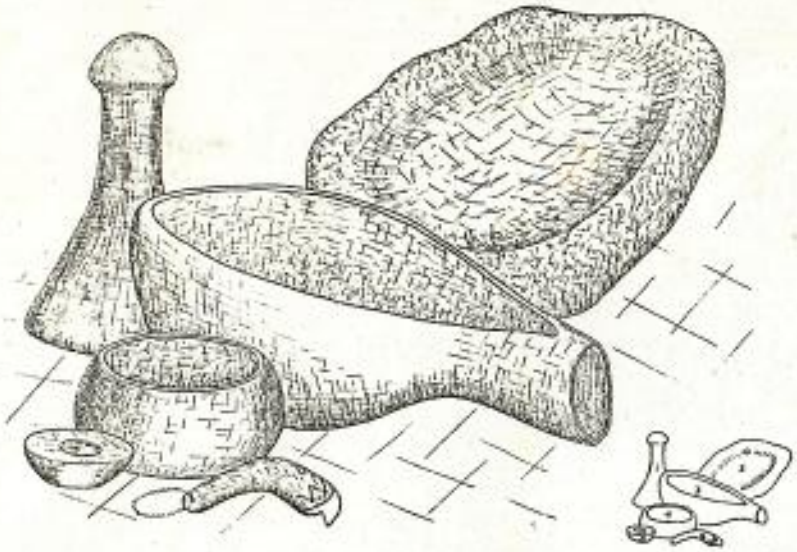


FIGURE 6. General view and cross section of stone sinkers: *a*, squid sinker of porphyritic basalt with original lashings and diagrammatic enlargement showing method of finishing and tying, length 3.6 inches, thickness 3.3 inches, height 2.5 inches, weight 25 oz.; *b*, bread-loaf type of sinker of porphyritic basalt but of finer texture, length 2.3 inches; height 1.3 inches; width 1.1 inches, weight 3 oz.

SINKERS, SQUID LURES, AND FLOATS

Two sinkers were found at the Kamohio shrine. The larger (fig. 6, *a*) is a squid sinker (*pohaku lu hee*), to which a cowry shell for lure was probably attached. The sinker is oval with one side slightly flattened. A cord, still



1. STONE POUNDER 2. STONE SALT PAN 3. GOURD STRAINER
4. WOOD BOWL 5. STONE KAHUNA CUP 6. SHARK TOOTH KNIFE

NOTE: MORE RECENT EDITION LISTS THE FACT THAT "TURTLES ARE PROTECTED" AND OTHER OILS CAN BE USED

Practical Folk Medicine of Hawaii

by L. R. McBride

HILO
THE PETROGLYPH PRESS
211 KINOOLE STREET 96720
HAWAII

HINU HONU

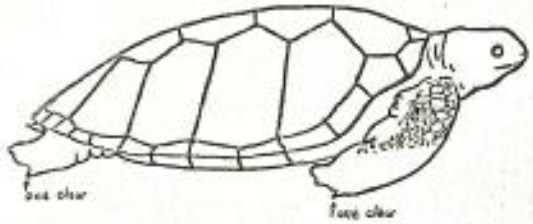
Turtle oil

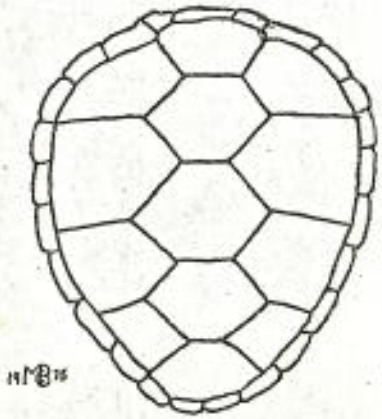
Hinu Honu (turtle oil) is obtained from the same green turtle *chelonia mydas* that is often used for food. This animal attains a maximum length of close to four feet. It is distinguished from other sea turtles by the horny plates of the back which do not overlap but meet edge to edge.

These turtles are most easily captured at night on secluded sandy beaches when they are returning to the sea after laying their eggs. Before hunting the turtle one must obtain a free permit from the Division of Fish and Game of the State of Hawaii, and become acquainted with the following restrictions:

Turtles may be taken only for home consumption, by using a spear or by hand. Using a net is forbidden. Each captured animal must measure 36 inches across the shell.

Turtle oil is procured by cooking the fat and expressing the oil from it. The finished product will keep almost indefinitely if refrigerated.





HOʻIʻO

Athyrium arnottii

Hoʻiʻo is a large fern restricted to the mountainous areas of Hawaii. The fronds are large and complex, often three or four feet long, and coarser than those of the *akolea*. Spore dots are abundant on the underside of the mature fronds. Below the branches the midribs are dark brown and smooth, but are covered with dark scales at the bases.

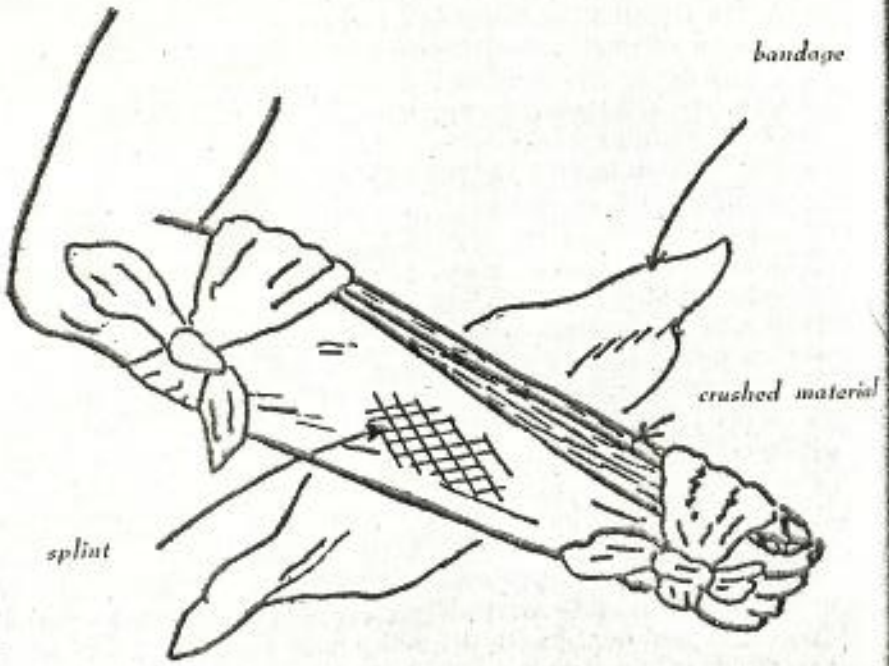
The *hoʻiʻo* fern is commonly found in the moist shady areas of the mountains. It will not grow at low altitudes. The young fronds are gathered as an article of food to be eaten raw with salted salmon or freshwater shrimp. Sometimes bundles of the young shoots can be found for sale in some markets.

The young fronds are gathered and dried to be used for medicine.

BROKEN BONES

If at all possible, any broken bone should have the expert care of an attending physician. If none is available, however, the bone should be adjusted to its proper position by someone who knows the art. When the bone has been set and immobilized by splints or a sling, the healing process can begin.

Take a *koali* vine with the whole root and mash it with a handful of Hawaiian salt. If the skin has been broken, use a piece of *koa* bark about the size of the palm of the hand and two *noni* leaves and pound them all together thoroughly. Put the crushed material on the injury and bind it gently in place with a clean cloth. This treatment should be repeated every day for four days and the broken bone kept warm and still until the healing has a good start.



Not to be used with a plaster cast

BURNS

Several foreign plants were instantly adopted by the Hawaiians for use in medicine. One of these was the true *aloe*, whose sticky sap is taken from a fresh cut leaf and smeared gently on a burn. The injury is left uncovered unless it is very severe. Claims for the use of *aloe* on burns range from mild to miraculous. Within a generation or two, its use almost totally supplanted the former employment of *'ape* root.

Aloe is also efficacious in the treatment of blisters, regardless of the cause, and is used in other remedies as well. In *Gardens of Hawaii*, Marie Neal states, "On Maui, about twenty acres of aloes have been planted since 1932, from stock long in Hawaii, to provide medicine which is used to treat athlete's foot and arthritis, when fresh to heal burns. When the leaves are cut, a thick bitter latex is drained off, which darkens and solidifies into the medicinal product."

CHAPPED LIPS

Like many other ailments, the prevention of this difficulty is easier than the cure. A tiny drop of *hinu hono* will obviate chapped lips, if applied in time. In an emergency, the oil from the side of the nose and between the chin and the lip can be rubbed on the lips with the forefinger to keep them from becoming cracked and sore. If the chapping becomes a problem, the sap from *kukui* twigs, applied to the lips, will bring relief and help to heal them.

CHAPPED SKIN

When the skin is cracked and scaly from exposure to the wind, the sap from the *ulu* tree will bring relief. Spread the fresh fluid from a cut in the bark onto the afflicted areas.

For raw places caused by excess sweating, where there is skin rubbing, *hinu hono* is especially good. Apply the oil evenly in a thin coat over the tender places. This will not only heal the injury and ease the discomfort, but will also prevent chapping if applied in time. *Hinu hono* is also excellent for the tender area that develops around the nostrils during a cold. Rub a drop of the oil around the nostrils before the nose cold becomes severe and then continue the practice until the cold ends.

RASH

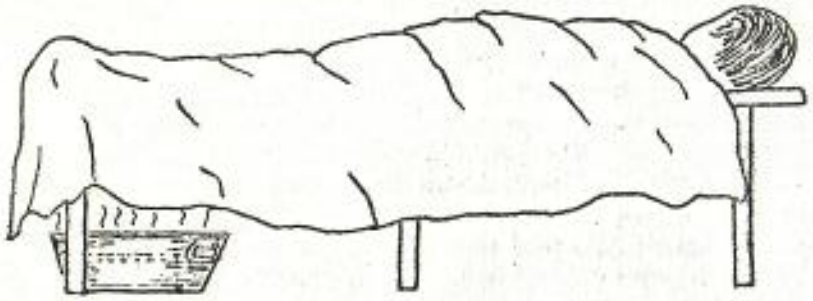
This ailment is best treated internally and externally at the same time. The bath or wash should not be neglected. To prepare it, collect about 40 *auhuhu* leaves, four pieces of *puakala* root bark, and a quart of *a'ali'i* leaves. Pound all of these together with a teaspoon of Hawaiian salt. Strain the mixture through a cloth and add it to a gallon of fresh water in a pan. Bring the solution to a boil, cover it and let it simmer over reduced heat for half an hour. When the bath is cool enough, sponge the body with the solution. Do this several times a day until the rash and its itching go away.

The internal treatment consists of a glass of *awa* prepared by the method outlined for a headache. Drink this much twice a day as long as the bath treatment lasts.

RHEUMATISM

Formerly the Hawaiians were said to treat rheumatism with a bath made by boiling *wawaeiole*, a lycopod found in the wet areas of the mountains. Remedies involving the use of imported trees seem to be more popular today.

Bruise about two quarts of *palepiwa* leaves and a small piece of



A WOODEN COT IS EXCELLENT FOR THIS REMEDY. ADDITIONAL BOILING WATER MAY BE USED TO PROLONG THE TREATMENT.

the bark. Boil these in a gallon or two of water for an hour. Bathe the sore joints with the warm solution. Dry hot cloths held to the afflicted area will be useful at night.

Another method of treating rheumatism consists of several parts. Pound or grind about a quart of *pepa* leaves and put the result into a gallon of water. Bring it to a boil and simmer it for several minutes. Drape the patient in a blanket to make a tent over the body but with the head outside. Put the steaming container underneath, near the patient's feet. Allow the steam to envelope the entire body. When the solution is cool enough, sponge the sore joints. This is done morning and evening for five days. In between the baths the afflicted should absorb as much sun on the body as tolerable. Keep the patient warm and comfortable at all times. Give *ko'oko'olau* tea to drink several times a day for the duration of the medication. At that time administer a laxative to clean out the system.

SCARS

After a cut has closed and the healing process has begun, massage the surface gently with *hinu honu* several times a day. This will make the scar as small as possible and perhaps eliminate it entirely.

Aloe is said to be beneficial as well in reducing scar tissue. The gelatinous interior of the leaf is applied two or three times a day.

SCRATCHES

Most scratches can be treated with a little salt crushed as fine as possible and sprinkled on the area. The milky sap of *ulu* applied directly to the scratch will prevent inflammation and start the healing.

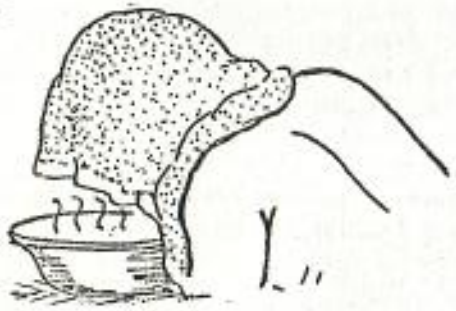
SHOCK

When a person has been badly injured, it is important to treat the victim for shock immediately. If the patient is conscious, administer a half-cup of salt water followed by a half-cup of water sweetened with *ko* juice. Half a teaspoon of each in the water will suffice.

SINUS TROUBLE

Clean sea water is one of the best medications for sinusitis. Take a little ocean water into the cup of the hand and snuff it up the nostrils. This is done five times a day for five days and thereafter only once a day to prevent a recurrence.

If the forehead and cheekbones ache from pressure in the sinus, drink an ounce of *okolehao* or other strong alcoholic beverage. Then bruise 40 leaves of *palepiwa* and bring them to a boil in a gallon of water. Hold a towel over the head and let the steam come up against the face for about 15 minutes. The patient then lies on his back while a towel saturated with the hot solution is wrung out and placed on his face. This should be continued until the patient is able to sleep. The sufferer should remain on his back without turning for the best effect. This remedy should be repeated twice a day until the sinus pressure is relieved. A gargle should be included in the final treatment, along with the remedies for sore throat and bad breath if necessary.



SKIN AILMENTS

Cracked skin, blotches, itch, scale ringworm and other disorders may be treated by the use of *ha'uoi*. Grind an entire plant with a tablespoon of Hawaiian salt and strain the juice through a cloth. Bathe the afflicted areas with the fluid and dust with *pia* starch. Repeat the process four times a day until the ailment heals. Coconut milk diluted with water may be used to clean off the medication.

Sores and ulcers are treated in a similar manner. Burn to ashes a dried frond of *pi'ipi'i-lau-manamana*. Crush two young green *kukui* nuts and apply the milk to the sore, using a small wad of *pulu*. Sprinkle the sore with the ashes. On difficult areas a paste of the *kukui* milk and ashes may be used.

In treating any skin ailments, the patient should not forget to clean out the system by drinking *ko'oko'olau* tea and taking a laxative.

SORE THROAT

The use of *uhaloa* in the treatment of sore throat is no doubt one of the best known folk remedies in Hawaii. The bark of the root is chewed and the juice permitted to coat the throat as it is swallowed. This is done several times a day until the soreness is gone.

SPRAINS

Severe sprains should be treated with the same medication as broken bones for rapid healing. Slight sprains may be helped with a combination of several plants. Grind or pound a root of *ilie'e* with an equal amount of *awapuhi* root and a ripe *noni* fruit. Put the pulp in a cloth and bind it loosely around the injured part. Change the dressing every day until the sprain has healed. Warming the injury in the afternoon sun will help promote a rapid recovery.

STINGS

A sting from a honey bee must be examined immediately to locate the stinger which generally remains in the skin. Remove it with tweezers, taking care not squeeze the poison sac on the end. Pound a *mikana* leaf and apply it as a poultice on the swelling and bind it in place. The milky juice from a green fruit can be used as an alternative if that is more available. This remedy is also good for Portuguese man-of-war stings and fish spine wounds.

STROKE, PREVENTION OF Refer to *Ko'oko'olau*

SUNBURN

The sap of young *kukui* nuts will bring relief from mild overexposure to the sun. More severe cases can be treated with the gelatinous interior of *aloe* leaves.

Sunburn can be prevented by an application of *hinu honu* on exposed areas of the skin. Wherever this oil is rubbed, the sunlight will not penetrate. Unfortunately, it also prevents sun-tanning as well.

TIREDNESS

Awa prepared as indicated for the treatment of headache is also good for tiredness. The diet should be checked to insure that enough different kinds of food are included. Red salt may be substituted for the customary white product. If the person is already getting enough rest, a tonic followed by a laxative may be beneficial.

TONIC, NEED OF

Pound together a quart of red and pink *ohia* tips, a handful of *ihi leaves*, a thumb-sized piece of *alaea* earth and a joint of *ko*. Add a pint of fresh water and stir well. Strain the mixture through a cloth and refrigerate in a container that can be shaken. Take a tablespoon of this tonic (well shaken) in half a glass of water before each meal for five days. *Lapine* tea should be drunk two or three times a day. A laxative should be taken to cleanse the system at the end of the treatment.

TOOTHACHE

For a tooth with a cavity cook a small piece of *awapuhi* root in a frying pan to soften it. Bite down on the root to press it into the hollow and leave it there as long as necessary. If a filling has been lost and the tooth is otherwise sound, collect the sap from an *ulu* tree and let it dry into gum. Mold the bit of gum to fit the socket of the filling and press in place. The toothache may be treated as for pain and a glass or two of prepared *awa* will help the patient to sleep.

WANA WOUND

An injury caused by stepping on a *wana* or sea urchin can be treated with the patient's own urine to bring relief. If the sufferer is squeamish, vinegar may be used as a substitute.

This affliction may also respond to the treatment used for stings and punctures by fish spines.

WARTS

The application of *hinu honu* to a wart along with gentle massage several times a day will sometimes cause a wart to go away entirely.

WETTING THE BED

Awa, prepared as described for a headache, is useful for alleviating this problem. Drink a small glass of *awa* about an hour before going to bed. Remember to void the bladder before retiring.

Notes

HAWAIIAN WORDS USED IN THE TEXT

kahakai	beach, seashore
kahuna	an expert in any profession
kahuna lapa'au la'au	a *kahuna* specializing in healing with the use of herbs
kama'aina	child of the land, old timer
kapu	taboo, forbidden
loa	long
lomi lomi	massage
mahalo	thank you
nui	great, large, very much
o'o	digging implement
okolehao	liquor distilled from the fermented roots of *ti*
puka	perforation, hole
pulu	yellow, cotton-like material on the base of tree fern stems
pune'e	moveable couch
pupu	general name for sea and land shells, hors d'oeuvres

About the Author

L. R. MCBRIDE

The author and illustrator of PRACTICAL FOLK MEDICINE OF HAWAII lives with his son Andrew at Volcano, Hawaii. For years he has been a student of all things Hawaiian and has lectured on geology, botany, history and legends of Hawaii.

Of part Seneca Indian descent, Mr. McBride grew up in Ohio, where as a child he first became interested in medicinal plants. He received a B. S. degree in geology from Ohio State University, with a minor in botany. In an eleven year association with the National Park Service at Hawaii Volcanoes National Park, Mr. McBride continued to add to his knowledge of all things Hawaiian.

In recent years the author has written and illustrated four outstanding original works: ABOUT HAWAII'S VOLCANOES; PETROGLYPHS OF HAWAII; THE KAHUNA, VERSATILE MYSTICS OF HAWAII; and PELE, VOLCANO GODDESS OF HAWAII. He is also the illustrator of KONA LEGENDS by Eliza Maguire.

Mr. McBride is known as a botanical illustrator and is listed as such in the Twentieth Century Botanical Art and Illustration Index.

BOOKS TO READ

Arnold, H. L. *Poisonous Plants of Hawaii.* 1968

Buck, Peter. *Arts and Crafts of Hawaii.* 1957
(Available as separate chapters paperbound or from the Book Gallery in a hardbound cloth edition.)

Degener, Dr. Otto. *Flora Hawaiiensis.* 1946 3 vols.

Degener, Dr. Otto. *Plants of the Hawaii National Park*

Handy, E. S. *The Hawaiian Planter.* 1940

Handy, E. S. and E. G. *Native Planters of Old Hawaii.* 1972

Handy, E. S. *Outline of Hawaiian Physical Therapeutics.* 1934

Ii, J. P. *Fragments of Hawaiian History.* 1959

Kaaiakamanu, D. M. and J. K. Akina. *Hawaiian Herbs of Medicinal Value.* 1922

Kamakau, S. M. *Ka Poe Kahiko, the People of Old.* 1964

Malo, David. *Hawaiian Antiquities.* 1951

Miller, C. D. *Food Values of Breadfruit, Taro Leaves, Coconut and Sugar Cane.* 1929

Miller, C. D. *The Fruits of Hawaii.* 1965

Moon, Jan. *Living with Nature in Hawaii.* 1971

Neal, M. C. *In Gardens of Hawaii.* 1965

Pukui, M. K. and S. H. Elbert. *Hawaiian English Dictionary.* 1974

Rotar, P. P. *Grasses of Hawaii.* 1968

Teho, Fortunato. *Plants of Hawaii and How to Grow Them.*

The above books may be found at
The Book Gallery
211 Kinoole St. or Kaik'o Hill Mall
Hilo, Hawaii 96720

as well as in the old manuscripts. Warnings are often given: "If ——— does not bring the healing on first application, do not repeat"; or, "Try ———, and if unsuccessful try ———"; or, "If such and such is the reaction, do not continue this prescription."

Many Hawaiians will tell you that the system has been established through a trial and error method, but that the original knowledge of the healing qualities of various elements used has always been, and is still, revealed by the ancestral *aumakua* in dreams.

PHARMACOPŒIA (LAAU)

The pharmacopœia is very extensive, including mineral, vegetable, and animal elements.

Some dozen mineral elements, other than fresh and salt water, are used. Salt (*paakai*), particularly Hawaiian red salt, which is colored with dust from red clay strong in ferrous oxide, is made from sea water and hence is rich in iodine. It enters into enemas, purges, and other remedies taken internally, and serves as well as the base for astringents, prophylactics, and counterirritants applied externally.

Next in importance is a certain red clay (*lepo alaea*) found in only a few pockets or veins on each of the islands and very highly valued by Hawaiians, who will guard the smallest piece with the greatest care. It is strong in ferrous oxide and has a rather chalky taste. This red clay, mixed with water and generally compounded with vegetable juices, is drunk to allay all kinds of internal hemorrhages, from the lungs, bowels, or uterus. Whether experimentation will reveal physiological effects of the sort that Hawaiians ascribe to *alaea* I do not know, but they universally have faith in its effectiveness. *Lepo alaea* is also an element in compounds prescribed as tonics for women and girls weakened by excessive menstruation or other uterine abnormality.

A whitish or greyish clay (*palolo*), such as is found in Palolo Valley on Oahu, is occasionally used in compounds and as a disinfectant in feminine hygiene. Black soil from taro patches is used in some compounds. Pumice (*ana*), powdered, is prescribed for thrush (*ea*) affecting infants.

Animal elements to the number of 29 (as counted to date of writing) enter into Hawaiian prescriptions. A few, like spiders' eggs, may represent borrowings from Chinese practice. But others, like sea urchin, lobster, and marine snail are certainly indigenous. The use of the sea urchin in compounds to be taken as tonic for debility is interesting, for this creature's flesh is strong in vitamines. Ashes of human hair and of tortoise shell are used. (Ashes of vegetable substances enter into many remedies.)

Up to the time of writing this paper, 317 botanical varieties furnishing constituents in remedies have been counted. These include seaweeds and

8. Hillebrand, William, Flora of the Hawaiian islands, Heidleberg, 1888.
9. Hochreutiner, B. P. G., Plantae hochreutineranae, Fasc. 1, 2, December 1925.
10. Mann, Horace, Enumeration of Hawaiian plants: Am. Acad. Arts Sci., Proc., vol. 7, September 11, 1866.
11. McClelland, C. K., Grasses and forage plants of Hawaii: Hawaii Agr. Expt. Sta., Bull. 36, 1915.
12. Neal, M. C., Personal investigation.
13. Pope, W. T., Manual of wayside plants of Hawaii, Honolulu, 1929.
14. Pukui, M. K., Manuscript notes supported by specimens.
15. Reed, Minnie, The economic seaweeds of Hawaii and their food value: Hawaii Agr. Expt. Sta., Ann. Rep. for 1906, pp. 61-88, 1907.
16. Rock, J. F., List of Hawaiian names of plants: Territory of Hawaii, Board of Agriculture and Forestry, Bot. Bull. 2, 1913.
17. Rock, J. F., The indigenous trees of the Hawaiian islands, Honolulu, 1913.
18. St. John, Harold, and Hosaka, E. Y., Weeds of the pineapple fields of the Hawaiian islands: Univ. Hawaii Research Pub., no. 6, September 1932.
19. Wilson, W. F., and Menzies, A., Hawaii 128 years ago, Honolulu, 1920.

ANIMAL SUBSTANCES USED MEDICINALLY

Aama: crab.
Aawa (fish): Lepidaplois medestus Garrett; L. bilunulatus Lacepede; L. albotaeniatus Cuvier and Valenciennes; L. astrophodes Jordan and Evermann.
Aholehole (fish). Dules sanvichensis Steindachner; Dules marginata Cuvier.
Akeke: a small floating marine animal.
Anae (mullet): Mugilidae; anae, full grown; amaama, medium-sized; kahaha, small; pua amaama, small fry.
Ea: turtle with overlapping plates on back, Chelone imbricata.
Haae: human saliva.
Halahala: fish.
Hee: squid.
Hinalea (fish): certain wrasse-fish, Labridae. See hunalea lolo.
Hinalea akilolo: Macrofaringodon geoffroy Quoy and Gaimard; Coris gaimard Quoy and Gaimard.
Hinalea lauwili: Thalassoma duperrey Quoy and Gaimard.
Hinalea lauhine: Thalassoma ballieui Vaillant and Sauvage.
Hinalea iiwi: Gomphosus tricolor Quoy and Gaimard.
Hinalea nukuiiwi: Gomphosus tricolor.
Hinalea nukuloa eleele: Gomphosus tricolor.
Honu (green turtle): Cheione mydas.
Hua moa: chickens' eggs.
Hua lanalana: spiders' eggs. See lanalana.
Hunalea lolo: Julis pulsherrima Günther.
Ina (Aristotle's lantern): sea urchins having short spines.
Kala (surgeon fish): Naso unicornis Forskål.
Kuna: brown freshwater eel, said to have been introduced.
Lanalana: mosquito or spider.
Makoko: young squid of the pulca type.
Manini (convict fish): Hepatus triostegus Linnaeus; H. sandwichensis Streets.
Mimi: urine.
Moa: chicken.
Moano (goat fish): Upeneus multifasciatus Quoy and Gaimard; one of the surmullets, Mullidae.
Nananana (spider): see lanalana.
Niho haukeuke: sea urchin which clings to rock faces, Podophora pedifora Aggassiz and Desor; also the slate-pencil urchin, Heterocentrotus mammilatus Linnaeus.
Olepe: fish.
Oopu hue.
Opae: shrimp.
Opae kolo: shrimp that lives in upland streams.
Opae kuahiwi: same as opae kolo.
Opae oehaa: shrimp with pincers, lives in lower streams and taro patches.
Opae hune or huna: sea shrimp.
Opae ula: a reddish shrimp found in a cave in Kau, Hawaii, where legend relates Puhi Ula lived.
Opihi: Helcioniscus exeratus; Helcioniscus argentatus.
Papai: crab.
Pilikoa (fish): Paracirrhitus forsteri

Schneider (also called hilu pilikoa); P. arcatus Cuvier; P. cinctus Günther (also called oopuka-hai-hai and poopa'a).

Ula (marine crayfish): Panulirius japonicus de Siebold; P. penicellatus Olivier.

Waiu: milk.

Weke ula (fish): Mulloides auriflamma Forskål.

Weke ulaula: Mulloides flammeus (Jordan and Evermann) Fowler; Mulloidichthys samoensis Günther.

MINERALS USED MEDICINALLY

Aila mahu: kerosene oil.

Hua kai: sea foam.

Kai: sea water.

Lanahu: charcoal.

Lehu: wood ashes.

Lepo ilaea: a red mineral deposit strong in iron sesquioxide (Fe_2O_3) hematite, commonly known as red ocher.

Lepo loi: taro patch soil.

Lepo palolo: a gray clay found in Palolo Valley, Oahu.

Nanahu: see lanahu.

Paakai: salt.

Ana: pumice.

Poho: chalk.

Wai: fresh water.

Wai lani: drops of water held in taro leaves, also rain water.

Wai puna: spring water.

BIBLIOGRAPHY

1. Akana, Akaiko; Akina, J. K.; and Kaaiamanu, D. M., Hawaiian herbs of medicinal value: Territorial Board of Health, Bull., Honolulu, 1922.
2. Andrews, Lorrin, A dictionary of the Hawaiian language, revised by H. H. Parker, Honolulu, 1922.
3. Beckwith, M. W., Kepelino's traditions of Hawaii: B. P. Bishop Mus., Bull. 95, 1932.
4. Campbell, Archibald, A voyage round the world, 1806-12, New York, 1817.
5. Cook, James, and King, James, A voyage to the Pacific Ocean, 1776-80, 3 vols., London, 1784.
6. Davison, Charles, Hawaiian medicine: The Medical Age, pp. 373-381, 1899.
7. Fornander, Abraham, Fornander collection of Hawaiian antiquities and folklore: B. P. Bishop Mus., Mem., vols. 4-6, 1916-20.
8. Gibson, W. M., Sanitary instructions for Hawaiians, Honolulu, 1880.
9. Hawaiian newspapers: Au Oko'a, August 11-September 29, 1870; Ka Hoku o ka Pakipika, April 2, 1863; Ke Alakai o Hawaii, 1928-29; Kuokoa, November 4, 1865; March 2, July 22, 1867; July 22-August 26, 1875.
10. Larsen, N. P., and Wisk, J. H., Medicine, in Ancient Hawaiian civilization, pp. 253-263, Honolulu, 1933.
11. Malo, David, Hawaiian antiquities: B. P. Bishop Mus., Special Pub. 2, 1903.
12. Pogue, J. E., Moolelo Hawaii, Honolulu, 1858.
13. Restarick, H. B., Medicine of Hawaii from kahuna to present period. Hawaiian Star Bulletin July 14, 1938

Haun DU 620
P21
V.58
No 5 p 10-11

Larsen, N.P.
Medical Lore . . .
in Paradise of the Pacific
May 1946

also V 72
No 10
p 72-74 Nov 1960

also

Haun.
DU 620
P21
V57 No 5
p 6-8
No 6
p 5-6

Larsen
Phallic 'temple' of Molokai
May, June 1945

also

DU 620
H4 1951
p 7-16

Larsen
Rededication of the
Healing Heiau Keaiwa
Haw. Hist Soc Hono
Report 1951

KA'ALU'ALU

Ka'alu'alu, so named because of the wrinkled appearance of the lava lying around the shallow bay (Fig. 47), had long ago a small settlement of fishing families living on the rough windswept flats behind it. Other families lived along the trail that connected it with Kama'oa. Apparently it was at Ka'alu'alu that Captain Cook sent a boat load of men ashore to look for fresh water, under command of Captain Bligh. "He found no stream or spring, but only rainwater, deposited in holes in the rocks; and even that was brackish, from the spray of the sea and the surface of the country was entirely composed of

FIGURE 47.—Ka'alu'alu Bay, Ka'u, Hawaii, 1959.

(stone) flags, and ashes, with a few plants here and there interspersed" (Cook, 1784, Vol. 3, p. 545).

More than sixty years later, in 1842, the Reverend John D. Paris (1926, p. 12) landed at Ka'alu'alu when he came as the first Protestant missionary to Ka'u. That there was then a sizable settlement nearby was attested by the fact that "The shore was lined with hundreds of natives" to greet him. That night he slept in the local chieftain's "house of refreshment and rest," a grass house three miles inland, where he was welcomed with a bountiful meal.

This same bay still served as a seaport for the Waiohinu area at the time the first sugar mill was built by Alexander Hutchinson in 1870, and it was still in use by the plantation in 1876. At the beginning of that enterprise all

building materials and supplies were landed at Ka'alu'alu and transported in bullock carts over the *pahoehoe* lava and the grasslands below Waiohinu. The sugar made in Hutchinson's first small mill from the very limited area of lands nearby had all to be shipped on a small steamship from that same bay. The remains of a small wharf are still perched on the rocks on the east side of the bay. Even in good weather loading and unloading must have been difficult in this open, shallow bay on a constantly windswept coast.

The tidal waves that coincided with the great 1868 earthquakes and volcanic eruptions swept away the homes of the Hawaiians living near the shore three years before Hutchinson started his plantation.

In 1959 there was only one solitary Hawaiian resident in Ka'alu'alu, living in a ramshackle house built of scraps of wood. He got his water from a brackish well. Hutchinson Plantation owned a small, substantial but weather-worn cottage, with a water tank nearby for storing water. There was one other shack that was occasionally used. Several boats were kept by or in the bay, which was one of the sites to which Japanese fishermen came regularly on weekends and holidays. For many years the inshore, narrow portion of the bay was closed in by a rough wall of lava chunks, and served as a *loko* or fishpond where mullet bred. This wall was washed out by a tidal wave in 1946. We were told that this bay is the only place where mullet come to spawn on the coast of Ka'u.

It is said that the inhabitants at Ka'alu'alu were prolific breeders; families were very large. Hence came the expression *Na mano piha'a o Ka'alu'alu*, meaning "The descendants of Ka'alu'alu are as numerous as driftwood."

The slopes rising gradually inland are covered with soil like that *manka* of South Point, which is volcanic dust mixed with a little humus from roots of surface vegetation. It was in this soil, in the rainy season, that the Hawaiians of this region planted their sweet potatoes, sugar cane, and, in post-discovery days, pumpkins, melons, and gourds. Presumably there were coconut trees growing around the shores of the bay before the tidal wave of 1868. There was ample fish, shellfish, and probably edible seaweed. Mullet, always prime food in season and rare in Ka'u, and other fish, shellfish, seaweed, and salt were exchanged with relatives living inland for taro or hard *poi*, for medicines, building materials, pandanus leaves for mats, bark for making *tapa* cloth, wood and stone for tools, weapons, and utensils. The paths up to the Kama'oa, Pakini, and Waiohinu areas, where now is a dusty automobile track through pastures of Hutchinson Ranch, must have been well traveled, as were the trails along the coast leading to small beaches where shellfish and seaweed, small-fry and salt were collected by women and children. But it must have been a meager life at best. Yet there were many people there in 1842, and they were notable breeders.

East of Ka'alu'alu is Kamilo. Its name means "swirling-currents." The currents swept Oregon logs and other flotsam into the small inlet. The bodies

of drowned persons here came ashore. There was a Ka-milo-pae-kanaka side and a Ka-milo-pae-ali'i side. Those on the side called *pae-kanaka* (peoples'-side) were commoners; but those on the *pae-ali'i* were the bodies of chiefs, which no commoner dared touch. It was to this beach that messages from loved ones traveling to Puna floated down on the current.

Na'alehu

Next to Waiohinu going east are two *ahupua'a* in which there were no settlements of prime importance, Kahili-pali-kahea and Kahili-pali-nui. Next to the latter, to which Waikapuna belongs, is Kawala, an *ahupua'a* of importance because to it belonged Na'alehu with its large population, rich planting areas, planting, healing and war *heiau*, sports arena, a pavilion of the *ali'i* in a grove of *kou* trees, and other distinctions.

As Ellis traversed this area in 1823 he described "mountain taro, bordered by sugar-cane, and bananas . . . planted in large fields on the sides of the hills, [which] seemed to thrive luxuriantly. On leaving the valley . . . along the foot of the mountains . . . the country appeared more thickly populated" (Ellis, 1825, p. 105). The hills referred to are the rolling southern slopes of Mauna Loa which rise quite steeply from the rather infertile, dry *kula* land covered with brush. The hills are covered with rich red soil and are now part of the sugar-cane fields of Hutchinson Plantation.

There was a variety of dry taro that was peculiar to this region, the *le'o*, whose corm was white and showed white in the center of the leaf and around its margin. When the corm was steamed or boiled it turned yellow, and the *poi* made from it looked like breadfruit *poi*; but the corm was not edible after cooking, nor was the *poi* when first made, because of the "bite" (*mane'o*), due to excessive undissolved calcium oxylate crystals. But when the *poi* had fermented a little, there was no more "bite," and the *poi le'o* was delicious. It was the preferred *poi* in Na'alehu for some families.

Naluapai was the name of a hill back of Na'alehu toward Waiohinu, where people of the lowlands took refuge in olden times when a *kahuna* received a revelation of tidal waves to come and warned the people to flee to high ground with their possessions.

There was also a cave here, named Keamuku, where women and children used to take refuge during war.

Na'alehu was a place of some importance in ancient times. There were two sayings that had reference to it. *Na'alehu i ka pala pa'a* ("Na'alehu of the thick-walled calabashes") means that folk of this locality were proudly thick skulled and stubborn—even more so than the run of Ka'u folk. Another saying shows that they regarded themselves, or were regarded as, merciless fighters. *Na'alehu haehae poko* means "Na'alehu tears to bits." This saying comes down from the memory of a warrior who was so strong and so fierce that he tore his victims to bits with his bare hands.

Westervelt, W. D. Hawaiian Legends of Ghosts and Ghost-Gods. Charles E. Tuttle Co. Rutland Vt, Tokyo 1963

Out in the sea Lono-kai was tossing in the high waves, passing all the islands, even to the land Hikiau. There he met the great watchman

of Kuai-he-lani called Honu (the turtle). He came quietly near the head. Honu asked, "Where are you going?" Lono-kai said: "You speak as if you alone had the right to the sea. You are a humpbacked turtle; you shall become a great round stone." Then the turtle began to slap its fins on the sea, raising waves high as precipices. Five times forty he struck the sea with mighty force, looking for the destruction of the chief as the waves passed over him. But Lono-kai waited until the turtle became tired, thinking the chief dead. As the waters became calm the chief raised his club and struck the right flapper of the turtle, destroying its power.

Then the left fin beat the sea into foam, but Lono-kai waited and broke that fin also; then he broke the back of the turtle into little pieces and went on his way. Soon the ocean grew fierce again. Huge waves came, and whirlwinds. He saw something red in the great sea—a kupua of the ocean. The name of this enemy was Ea, a great red turtle, who crawled out and asked where he was going. Lono-kai said: "What right have you to question me? Have I questioned your right to go on the sea?"

Ea said: "This is not your place. I will kill you. You shall be food for me to eat. When you are dead I will go and kill the watchman who let you come into this tabu-sea of my chief."

"Who is your chief?" asked Lono-kai. Ea replied: "Hina-kekai[the calabash for boiling water], the daughter of Pii-moi. Now I will kill you."

Then Ea began to strike the water with his right fin, throwing the water up on all sides in mighty waves, expecting to overthrow Lono-kai and his boat. When he rested to see the result of this battle his fin was on the surface, and the chief struck it and broke it.

Then in another fight, when head and fin were lifted to destroy the boat, Lono-kai struck the neck and broke it, so killing his enemy.

Now he thought all his troubles were over and he could go safely on his way.

But soon there lay before him a new enemy, floating on the sea, a very long thing, like a long stick. He approached and saw that it was like the fin of a shark, but as he came nearer he observed the smooth skin of a long eel. Lifting its head and looking right at him, the eel said: "O, proud man, you are here where you have no business to be. I will mix you with my awa and eat you now." Then he struck at Lono-kai with his tail and hit his eyes and knocked him down, then, thinking Lono-kai was dead, he turned his head to the boat to catch the body, but Lono-kai, leaping up on the head of the eel, holding his boat with one hand and his club with the other, struck the head with the magic club,

From Ch XVII Ke-au-nini pp 163-223

taro patches had to be walled to hold the water. Ditches had to be dug to bring the water from streams or springs, and dams had to be made to control the flow. Taro patch soil is very heavy, and there were no animals in Hawaii to be used in field work. There were no large animals of any kind in the Islands. The men of Hawaii did the field work. Women were not asked to help. The women of the Far East worked with the men in the rice fields and did work not unlike that done in the taro patches of Hawaii, but the Hawaiian woman was not expected to be a field worker.

Besides poi, the chief food of the people was fish. Land animals were small, the amount of meat limited, and women were forbidden to eat pork, so the Hawaiians turned to the ocean about them for their main meat food. They were skilled fishermen. They fished near the shore and in the deep sea as well. Along the shores they built many fishponds, with firmly built stone walls. Some of these fishponds with their ancient walls are still in use. Hawaiians made fish nets and lines of olona, a plant of the nettle family. This plant has a fiber so strong that many years after Hawaii began to buy ropes and cord from the outside world, men talked about raising olona and making rope in Hawaii to sell abroad. The plant was gathered and soaked so that the inner bark might be removed. This was scraped out and twisted into cord for fish nets and fish lines. Hooks were made of bone and shell.

Fish and poi were the staple articles of diet. Other common foods were bananas, yams, sweet potatoes,

pia or Hawaiian arrowroot, coconut, sugar cane, breadfruit, young taro leaves, taro stalks, and seaweeds. Sugar cane was chewed. It was impossible for the Hawaiians to prepare molasses or sugar from the cane because this cannot be done without boiling. We know that raw sugar cane contains a great deal of soluble iron and that the practice of chewing sugar cane was very good for the Hawaiian people. They did not know this. They chewed it because they liked it, and because their teeth were cleaned by chewing the fibrous stalks. This was the only way the Hawaiians could clean their teeth. It was both effective and pleasant.

The diet of old Hawaii did not have much variety, but it was healthy and well balanced. All foods eaten then are still used in Hawaii, and as more is learned about healthful diets, efforts are made to encourage people to eat more of the old Hawaiian foods. School children in health classes, for example, are often fed poi, and sugar cane for children to chew is delivered regularly by plantations to some schools.

The Hawaiians made material, which took the place of cloth, out of the inside of the bark of different plants. One of these was the paper mulberry bush known as *wauke* and the other a related nettle plant called *mamake*. The inside of the bark of these plants was soaked and pounded into a material known as kapa or tapa. Pieces of the softened bark were laid on a log of wood shaped for the purpose. They were pounded with wooden beaters until the fibers were felted into thin sheets. Designs carved into the beaters made

came all together on the canoe's starboard side, the men shoto their oars at the same time at the side and killed the fish. These are how a'ua'u fish are caught. The Gilbert Islanders here among us in Lahaina dotted the sea outside of Honuaiki with their canoes with pecaea fish poles for a'ua'u and with opelu fish to chew and spew into the water when schools of the a'ua'u came in. They never missed with their fish poles and barbed fish hooks bought in shops, with bits of rope similar to olona fibers. You will then see strings of a'ua'u being peddled on the roads, selling for three or four a'ua'u for a quarter. That was reasonable and was eaten after a cup of awa to remove the bitter taste, according to the people of Ulu. Perhaps so.

Turtle Fishing --- Polihua at Lanai was a very famous place for turtle catching. The natives catch them on the sand on shore if they need meat. Strangers do too, when they want to visit and see for themselves and if they wanted some to eat. It was a good thing to see this famous fish of the birthplace of my beloved mother who has preceded us yonder when your writer was but a wee child. This was the fish that Pahulu asked the gods not to allow it to have any irritation in its flippers or tail. When strangers go there to Lanai to visit. Polihua and Ke-ahi-a-Kawelo where a famous chiefess of the land of ours lived was warned. John Makihei, Knapuiki, S. Kealakaa and Judge Kahoohalahala gave us some weke-aa and other fish with the warning, "Don't eat it (weke) lest Pahulu will get you." It was an irritation of the throat and when you are asleep you are lifted up in the air and rocked. Pahulu was the last ghost that Kaululaau pursued into the sea. Kaululaau held on as hard as he could but it slipped through his hands into the sea. The tale was a theme for a song composed by one of my nephews, now passed to the other side, who learned music. It was for the benefit of the Girl's School at Nakaaao, twenty-six years ago. Alio, Heber Ipai and Junior Ihihi are the survivors today that were called professors of singing of those days by Governor John M. Kapena. Here are the lines of the song that the writer remembers:

Chorus: Pele makes a rustling

A rumbling noise in the Pit.

The goddess looks askance

While Pahulu ran and dived into the sea.

Verse I. Bring us some money

To assist Makawao.

We have a hundred

To help her with.

There are two more verses but this is enough about Pahulu and Kaululaau who fought the ghosts of Lanai and killed them. He was a handsome and good person who was vexed at the ghosts for chasing the fishermen of Lanai a very long time ago, so he ran away from his parents. If some singers wish to learn the tune of this song let him come to the writers home and it will be given to him free of charge. This was a song that roused a great deal of enthusiasm and if I am not mistaken the amount received for the concert that was opened for the benefit of the Maunaolu Girl's School of that day was almost two hundred dollars.

Say, the writer has been digressing, but no matter, Hawaiian meles are enjoyed when one knew the verses. Yes, when you get to Polihua to catch turtles you need all your strength. It is done thus — Go to Polihua in the evening and sleep there and in the early morning, in the twilight, draw close to the edge of the clumps of grass adjoining the sands and there you will see large female turtles returning to the sea. Run as fast as you can to reach a turtle, step with your left foot on the left flipper of the turtle and turn the turtle over with your left foot on the left flipper of the turtle and turn the turtle over with your hands with all your might. If you succeed in turning it over, you are going to eat some turtle meat but if you fail, you'll find yourself in the sea. It is better to let you go or your clothes will get a soaking in the sea. The other way is by diving into the sea. Your writer has been accustomed as he went to sea frequently to seeing turtles gathered close to the reef. At the time that you see the turtles coming up to breathe, paddle softly until you are very

close. The turtle will dive downward and then you'll distinguish it clearly. Dive down and catch it, turn it over as quickly as possible and it becomes very light and easy to land on the canoe. This seems to be the method used by most of the people who relish the greenish luau meat in a turtle. Still the easiest way to catch a turtle is by spearing it and if one speared them at Pollhua one caught several times four of them. In the year 1850, there were many natives of Honorabora here in Lahaina that came from the whaling ships. Because breadfruit, coconuts and other fruits were numerous, they wanted to stay. At a place called Puehuehu-nui directly mauka of the home of the writer there was about thirty of them. One of them was called Piope and he was the cleverest, number one spearer of turtles. He went often to spear them and when he returned the canoe was loaded with them. He could spear turtles from five to ten fathoms away. Because we wanted to know of the skill of Piope, the Honorabora native in turtle spearing, one of our boys named Iona Kakaele went to see for himself and assured us of his skill; he sometimes sent hisspear straight forward, or upward, or downward to pierce it in a distance of ten fathoms. Who among us is a skilled Hawaiian turtle spearer. I have heard of the "mahimahi" of Kona, that the lads of the calm seas of Ahu who are skilled in turtle spearing are the prominent gentlemen J. K. Kahele, G. P. Kamauoha and S. W. Kaai. They did not use a regular spear but the real harpoons such as were used by whalers to stab at the fins and get enough to weight down the hips of Hilo's multitude. They wouldn't miss in their spearing for they are of the calm seas sung of in a mele --

It is Kona of the peaceful seas;
The horizon clouds tell of the calm.
The icy dewdrops are falling,
The sun light stream over the sea.
As the children play at na-u,
To hold back the rays of the sun.
Warm indeed is the land,

Fondly loved by the host of Hooluhi.
Drooping and wilted stands Kona in the sun,
The sea of Ihu, the beloved flows on,
Smitten by the tear drops shed by the clouds.
Poured on the upland of Alana so,
The rainy mist darken the breadfruit of Weli.
This is a threat by my loved one to me,
But a daring thought tells me to remain,
Oh how I am hurt by him.

This is a famous mele of the land of these heroes of Kona. How my affection goes out to them.

Fishing with a Fine Spear --- At Kuamoaloa, Kaupo in the year 1876, your writer went swimming and fish spearing with a good friend, Mr. Lohiau. Lohiau did the diving and spearing while I held the cord on which the fish was strung. If you watch a person diving down to the seafloor you will notice how quick his hand is in spearing a fish. If it appears outside of its hole it is a fish that is not missed by the thrust of the spear and is done quickly. It seemed that we had not been fishing more than a half hour when we had enough on our string. There was nenue, kala, pelani, panuhunuhu and so on but the trouble with that kind of fishing is that it is fearful and terrifying. It is clear that you are practically placing your body between the teeth of sharks. While we were swimming about, the sea was reddened by the blood of the stabbed fish and the string of fish was trailing behind us. Therefore I said to my fellow fisherman, "Let us go home," but I did not express my fear of the small headed tiger shark of the ocean and that man-eating shark the ihuwaa.

I remember a story told me by a native of Kaupo who lived here in Lahaina a long time. He is now gone. He told how he fought a shark on the beach of Manawainui near Kahikinui Ranch. He was doing this very thing, fish spearing. He fought the shark from the deep blue waters from the outside limit to the

HINA KEAHI.

JUST mauka of the Hilo Boarding School are three large, rounded hills which, centuries ago, were mud craters. Covered with the green of rustling cane-tops, at a distance they appear to be soft, grassy mounds. Many a tourist, gazing from the deck of an incoming ship, has yearned to "stroll over those smooth, rolling hills," only to find the pastime quite impossible on nearer view, which revealed the "velvety grass" as lusty sugar cane stalks ten to fifteen feet high and closely interwoven.

But now the last crop of cane has been harvested from these graceful mounds and their slopes are being prepared to receive the dwelling-houses of any who choose—and can afford—to live in the rarified atmosphere of romance that hangs about this Hawaiian Olympus.

Nor is the term Olympus as applied to these hills a redundant flight of fancy. Long ago—many, many years before the haole came to plant his sugar cane in their deep, rich soil—these hills were the homes of several beautiful goddesses.

The makai and largest hill, called Halai, was the home of Hina Keahi, eldest daughter of the goddess Hina, who lived at Waianuenue—the cave behind Rainbow Falls in the Wailuku River—and sister of Maui the demi-god. To Hina Keahi was given power over fire.

In many ways this young goddess aided her people, bestowing upon them the blessing of protection from fire while teaching them many ways in which to use it. The remarkable fact has often been noted, by the way, that although the Hawaiians always lived in grass houses, seldom was one known to be destroyed by fire. Hina Keahi was well beloved by her people and her lightest commands were obeyed meticulously.

Food had always been plentiful in Hawaii. The people cultivated their fields, which yielded bountifully. But one time the crops failed—grew smaller and smaller—and began to shrivel up and die. Soon a famine spread over the land. Crops were allowed to wholly perish because none was strong enough to tend them.

Hina Keahi saw that unless something was done at once her beloved followers would all die. Calling them about her she commanded that an immense imu be dug in the top of Halai Hill. "Prepare a place for each kind of food as though you were ready to fill the imu,

then bring as much firewood as you can," she ordered.

The starving people summoned new strength at this promise and worked for many days preparing the enormous imu. Knowing a human sacrifice would be offered as the only possible result of their labors, they lived in fear and wondered who would be chosen. Still, they never once thought of deserting their work and finally everything was in readiness.

"Fill the imu with wood and heat it," commanded Hina.

As soon as this was done she turned to the wondering people and said: "Listen to what I tell you, and follow my instructions. It is the only way you can be saved from starvation. I will step into the imu and you must quickly cover me with earth. Do not stop throwing earth over me until the last puff of smoke disappears. In three days a woman will appear at the edge of the imu and tell you what to do."

Bidding them farewell, Hina Keahi stepped quickly into the red-hot imu. Immediately a dense white cloud of smoke surrounded and concealed her. For a moment the people stood transfixed at the sight; but remembering instructions they at once began covering the imu with earth.

Followed then three long days of waiting fraught with mingled hopeful expectancy and anxiety for their goddess. On the third day everyone repaired to the edge of the imu and awaited the appearance of the woman of whom Hina Keahi had spoken.

In the meantime Hina Keahi had not remained in the imu for long. The fire had not harmed her, for she had complete power over it. Going underground she made her way toward the sea, coming to the surface of the earth somewhere near the spot on which the Hilo Boarding School stands today. The place was marked by a bubbling spring.

Once more she disappeared underground and again came to the surface, creating another spring near the present location of the Hilo Hotel. A third time the goddess followed her subterranean route, coming up in a third spring at the place now occupied by the American Factors' lumber yard. Refreshing herself in the clear waters, she started back to her home, this time traveling above ground.

Thus on the third day from the disappearance of Hina Keahi those gathered about the imu saw a strange woman

approaching from the direction of the sea. As she drew near they noticed a striking resemblance to their own goddess, yet she, they knew, was buried in the imu. In fear they drew away, but the strange woman smiled and told them to uncover the imu.

Reluctantly they set to work, dreading the sight which all had in mind. But when the imu was uncovered they found it filled with cooked food—enough to supply their needs until the rains came and new crops could be grown and harvested. In gratitude they turned to thank the strange woman, but she had vanished.

And to this day one may see the immense imu in the top of Halai Hill, now overgrown with a thicket of feathery bamboo, which the people left open in memory of their timely deliverance.

HINA KULUUA.

HINA KULUUA was the second daughter of the goddess Hina, who lived behind Rainbow Falls. Hina Keahi, the elder sister, had received the best of the gifts which their mother could bestow—power over fire and ownership of the largest of the Halai hills. Known as the goddess of fire, Hina Keahi was indeed very powerful and one time gave spectacular evidence of it in saving her people from starvation, as told in the legend, Hina Keahi.

Naturally everyone looked upon her thereafter as the most wonderful goddess in the Islands. Even her sister's little band of followers did not refrain from open admiration of the beautiful fire goddess.

This made Hina Kuluua exceedingly angry. Her jealousy overwhelmed her; she could not bear to let her sister claim so much glory, and she have none at all.

It was not long after this that another famine swept the land. Hina Kuluua thought fortune was at last coming her way. Here was the very opportunity she craved. Now she would prove her power superior to her sister's and all the people would sing her praises and worship her alone.

In her excitement she entirely overlooked the fact that she was goddess of rain, and not of fire. She ordered an immense imu to be dug in her own hill, Puu Honu. Comprehending her intentions the people at once realized the utter futility of her proposed action and pleaded with her against it; but to no avail.

"Do you mean to tell me that my power is less than Hina Keahi's?" she demanded angrily. "Do you think that I, Hina Kuluua, cannot do as much for my people in their time of need? I will show you! Then you shall recognize Hina Kuluua as the greatest goddess in Hawaii."

"You can help as well and perhaps better than your sister," they argued, "but you cannot do it in the same way. Your power, though it may be as great, is nevertheless entirely different from hers."

Then Hina Kuluua would order them out of her sight and command them to hurry the completion of the imu.

At last all was ready. A group with tear-stained faces were gathered about the smoking imu. Hina Kuluua approached, her head held high in an air of triumph. She stepped to the edge of the imu, cast a glance of disdain toward the wailing women and said, "Cover me quickly. Watch near the imu and in three days a young woman will appear. She will give you further instructions."

Stepping into the imu she was quickly covered with soil. The people had expected a cloud of smoke to appear, but were somewhat surprised to see the little there already was become even thinner and dwindle away to mere nothingness.

Slowly the long days of waiting passed. The third day dawned. All morning the people watched for signs from the imu. Late in the afternoon found their vigilance unbroken; night closed in and still no sign. Dawn once more, another day of anxiety. On the fifth day they could no longer restrain themselves and cautiously uncovered the great oven.

A dark greyish cloud rose over the imu—that was all. Within, the people could distinguish the charred remains of their proud goddess. With reverence they covered the imu once more and carefully smoothed it over.

That is why today you cannot see a deep crater in Puu Honu as in Halai, and why the dark, gloomy cloud—a sure sign of rain—often hangs low over the one-time home of Hina Kuluua.

and occupied the Hawaiian Islands, it is now impossible accurately to define. Ethnologically, we can trace them backward to India; historically, we can not trace them even to their last point of departure, the Marquesas or the Society Islands. That they are of the same race that now inhabit the eastern and southern parts of Polynesia is beyond a doubt. That that race was settled in the Asiatic Archipelago centuries before the Christian era, I believe to be equally certain; but whether the emigration into Polynesia took place before the Christian era, or was occasioned by the invasion of the forefathers of the Malay family from India about the commencement of that era, there is nothing, that I am aware of, either in Polynesian, Malayan or Hindu traditions to throw any light upon. In Hawaiian tradition, there is no distinct remembrance, and but the faintest allusion to the fact that the islands were inhabited while the volcanoes on the leeward islands were still in an active state. It is impossible to judge of the age of a lava flow by its looks. Portions of the lava stream of 1840, flowing from Kilauea into Puna district of Hawaii, were in 1867 covered with a luxuriant vegetation; while older flows in Puna, of which no memory exists, the last flow from Hualalai in 1791 or 1792 through Kekaha on the west of Hawaii, and the flow near Keoneoio in Honuaula, Maui, called Hanakaie, which is by tradition referred back to the mythological period of Pele and her compeers, look as fresh and glossy today as if thrown out but yesterday.

Geologically speaking, the leeward islands are the oldest in the group and, with the exception of the legends of Pele and Hawaii Loa, there is no trace or tradition in the popular mind that their volcanoes had been active since the islands had been inhabited. But both on Molokai and on Oahu human remains have been found imbedded in lava flows of undisputed antiquity and of whose occurrence no vestige of remembrance remains in song or saga.

In 1859, Mr. R. W. Meyer, of Kalae, Molokai, found in the side of a hill on his estate, some seventy feet beneath the surface and in a stratum of breccia—volcanic mud, clay and ashes—of several feet in thickness, a human skull whose every cavity was fully and compactly filled with the volcanic deposit surrounding it, as if it had been cast in a mould, evidently showing that the skull had been filled while the deposit was yet in a fluid state. As that stratum spreads over a considerable tract of land in the neighborhood, at a varying depth beneath the surface of from ten to four hundred feet, and as the valleys and gulches, which now intersect it in numerous places, were manifestly formed by erosion—perhaps in some measure also by subsequent earthquake shocks—the great age of that human vestige may be reasonably inferred, though impossible to demonstrate within a period of one or five hundred years preceding the coherent traditional accounts of that island.

Hawaiian traditions on Hawaiian soil, though valuable as national reminiscences, more or less obscured by the lapse of time, do not go back with any historical precision much more than twenty-eight generations from the present (about 1865), or say 840 years. Within that period the harbor and neighboring coast-line of Honolulu has remained nearly what it now is, nor has any subsidence, sufficient to account for the formation of the coral-pan in that place, or subsequent upheaval been retained in the memory of those twenty-eight generations.

Legend of Kana and Niheu.

HAKALANILEO[2] was the father and Hina[3] was the mother of Kana[4] the first-born, and Niheu[5] was the younger brother of Kana. Uli[6] was the grandmother. Hamakualoa, Maui, was the land in which Kana was born, and Halauoloolo was the name of the house. At the birth of Kana, he was in the form of a piece of rope; he had no human form. After the birth of Kana, Uli took and kept it until it assumed a human form, then she brought the child up. The place where Kana was brought up was in Piihonua, Hilo, Hawaii, a place lying to the East of Wailuku, where his house was built, called Halauoloolo.[8]

In this legend it is said that the body of Kana grew to be very tall and large and was terrible to behold. While he was being brought up, he grew so fast[7] that the house had to be lengthened, so that it extended from the mountain until it was almost to the edge of the sea. Such is the story as told of this house, Halauoloolo.

RELATING TO THE HAUPU HILL.

This hill called Haupu,[8] was a hill situated on Molokai and the chief who lived on this hill was Kapepeekauila by name and his chief priest was known by the name of Moi.[9] Once upon a time this hill, Haupu, moved or floated to Mokuola[10] in Hilo, Hawaii, carrying along the chief and the people and the things that grew on the hill. When Hina the mother of Kana and Niheu saw that the land was pleasant to the eye, she climbed on up the hill with the idea of taking a look at the place. As soon as Hina was on the hill of Haupu, it immediately moved back to Molokai, thus leaving Hakalanileo to mourn for her loss. When Hakalanileo saw that his wife was being carried away he tried to recover her, but found it impossible to do so. After his failure, he proceeded to Niheu and informed him that Hina had been taken away by the hill of Haupu. When Niheu heard this report from his father, he said: "I cannot get her, there is only one person who can do it, and that is Kana. You must go to him personally; don't be afraid of him and run away if he should turn and look at you. Just

[1] This is a popular myth of great antiquity (judged by the references thereto in one way and another in Hawaiian legendary lore), of which there are several versions of various titles.

[2] An easy-going king, unbeserving of the untiring efforts of his sons to rescue their mother and avenge her abduction.

[3] *Hina* in this story has been said to be Hawaii's Helen of Troy. She has been a prolific inspiration of freaks and foibles in the folk-lore not only of these islands, but throughout Polynesia.

[4] *Niheu*, said to have special power or qualifications—Sampson like—through his long hair.

[5] *Kana* could thank his stars for grandmother *Uli*, not only for her supernatural powers in seeing his possibilities in a piece of rope, but directing his efforts to avenge the loss of his mother. This name, *Uli*, figures as the famed and powerful goddess of the *kahuna* or sorcerer priests.

[6] The name *Halauoloolo* indicates a long shed kind of structure rather than a house.

[7] *Kana* apparently developed on the Jack and the Beanstalk principle.

[8] *Haupu*, also known in tradition as the "Rocks of Kana", is a bold bluff on the north coast in the Pelekuna district of Molokai.

[9] *Moi* was one of the renowned priests of a period preceeding the arrival of *Puao* in the twelfth century, from Samoa.

[10] *Mokuola*, or Coconut Island, forming the eastern portion of Hilo Bay.

stone from the beach and placed it under the rock, stopping it from rolling any further. By this action of Kana the rock was stopped right in the middle of the steep cliff; and it is there to this day, on the cliff of Waikolu. This saved Kana and the canoe Kaumaielieli from destruction by the rock. After this Niheu started off for the top of the Haupu hill, to the rescue of his mother, believing that he could do this with his own strength.

RELATING TO NIHEU.

Niheu was a fearless warrior and had very little respect for the strength of others. He was so brave that he oftentimes fought against a whole army, without the least hesitation. When he was ready to start he took up his war club, Wawaikalani, and placing one end of it on the cliff, the other resting on the canoe, he walked ashore upon it. After landing he proceeded to the top of the hill of Haupu, where the chief Kapepeekauila was living, in company with Hina, the mother of Niheu, who was for the time being his wife.

RELATING TO THE HAUPU HILL.

The real name of the hill was Kahonunuimaeleka,[1] a turtle, and had flippers on the sides. Whenever these flippers closed the hill would extend up to the heaven. Around this hill was a fence called Paehumu composed of ti-leaf of Koaea and the ulei of Nuuhiwa. These things grew so close together that they served as a windbreak, and no wind could touch the chief's house, called Halehuki.

When Niheu came up to the fence he beat down the ti-leaf and ulei with his war club, causing the wind to enter Halehuki. As the wind blew into the house, Kapepeekauila asked: "What has caused the wind to enter here?" "There is a boy outside with a war club. He has beaten down the fence." Hina then spoke up: "It must be Niheu, our brave son. He is without fear. We shall be killed." While she was speaking, Niheu came in and taking hold of Hina started off with her. Before Niheu came into the house, Hina had told Kolea and Ulili the place wherein the strength of Niheu laid; it being in the strands of his hair, called Wilikalinoamohalaikaekaeka, and at the same time told them to take hold of the strands and pull on them which will cause Niheu to let go of her, for this would cause him to lose his strength.

When Kolea and Ulili saw that Hina was being taken away, they flew and held Niheu by the hair. When Niheu saw that his hair was being held, he let go of Hina, took up his war club and struck at Kolea and Ulili. While he was doing this, Hina ran back to the house, to her new husband Kapepeekauila; Niheu, therefore, walked back to the canoe, and he was questioned by Kana as follows: "How about our mother?" Niheu replied: "I had her and we were on our way here when I was attacked; my hair was pulled by the two birds, Kolea and Ulili. While I was beating them off, Hina ran back again." Kana then said to Niheu: "You stay here on our canoe while I go after our mother." With this Kana stood up in the canoe and peeped over the hill of Haupu. At this the hill extended on up and Kana also extended on upward too. In doing this

[1] *Ka-honu-nunui-ma-eleka*, literally, the very large turtle at Eleka.

Kana had to go up to the highest heaven, in the deep blue sky and his body was in the form of a spider's webb, for he was in great need of food and meat.

When Niheu saw that the legs of Kana were thin and in the form of a spider's webb, he felt that it was because he was starving; so he called out in a loud voice to Kana: "Lie toward Kona, to Uli our grandmother, where you will be able to get food and meat." Niheu had to repeat this call for three days before Kana heard him. When Kana heard the call of Niheu, he bent himself over across Molokai, over the top of Haleakala, over the mountain whereby a groove was formed across Haleakala which can be seen to this day.

When Kana reached Kona and the home of Uli his grandmother, he laid down by the doorway until Uli awoke in the morning, and when she came out she saw Kana, her grandson. She then woke him up and began feeding him. When Kana was satisfied, the increase of his body began to come down until it reached his feet which were in the canoe, where Niheu was still waiting. When Niheu looked and saw that the legs were increasing he arose and cut off one, for he was angry with Kana for eating till satisfied. The numbness from this cut went up until it reached the head of Kana, and upon informing his grandmother of this fact, Uli said: "Your younger brother Niheu got angry with you because you partook of food [without remembering him], so he has cut off one of your legs." After this Uli said to Kana: "You have conquered over your opponent. When you rise up you must extend upward until you tower above the Haupu hill, then make eyes at the hill and when it extends up to meet you, you reach down and break off the flippers on the right side; then break off the flippers on the left side; then it will have no more strength." After these instructions had been imparted, Kana arose and stood upright until he towered over Haupu, when he made eyes at the hill. At seeing this Haupu extended upward to meet Kana; Kana then reached down and broke off the flippers. As soon as the flippers were broken, the power of Haupu ceased. Kana then stepped down on the hill and it fell to pieces, and as the pieces fell into the sea, they were left there in the form of small hills,[1] which can be seen to this day, at the mouth of the Waikolu Valley, overgrown with loulou palms.

By the death of Haupu,[2] the chief Kapepeekauila was conquered and Hina was recovered; and she was brought back to live with her first husband Hakalanileo. This ended the war between Kana and the Haupu hill.

[1] Known as the "Rocks of Kana".

[2] Meaning the overthrow of Haupu.

Legend of Laukiamanuikahiki.

MAKIIOEOE was the father and Hina was the mother of Laukiamanuikahiki. Kuaihelani was the home of Makiioeoe where he ruled as king and where his queen lived from whom he had one child, Kahikiula by name. Hina belonged to Kauai, where Laukiamanuikahiki[1] was born. Makiioeoe in his travels came to Kauai where he met Hina and took her to wife, and after living with her for some time, Hina conceived a child. Shortly after this Makiioeoe prepared to return to Kuaihelani; so he said to Hina: "I am going home. If you should give birth to a boy give him my name; but in case it should be a girl call her Laukiamanuikahiki. If after you bring the child up she should express a desire to come in search of me, these shall be the tokens by which I shall recognize the child: this necklace of whale's teeth, this bracelet, this feather cloak.[2] She must be accompanied by a large canoe, a small canoe, large men, small men, a red canoe, red sails,[3] red bailing cup, red cords and a red man." Makiioeoe then took his leave and returned to Kuaihelani. When he arrived home he instructed his guards as to the sign by which to recognize his daughter[4] and he also instructed his servants to proceed and plant all kinds of fruit and other things for his daughter Laukiamanuikahiki. He also caused a pool of water to be made as well as other things and placed a kapu on them all to be free only after the same shall have been used by Laukiamanuikahiki.

After the birth of Laukiamanuikahiki, Hina and her husband brought her up all by themselves. It was Laukiamanuikahiki's custom to bring in other children to their home and give them all the food; which action caused her father to get angry and very often punished her. This punishment was kept up by the father for some time.[5] Because of this, the child suspected that this man could not be her own father; so she began questioning her mother who her own father was until the mother could bear it no longer. Hina then said to Laukiamanuikahiki: "You go to that cliff; that is your father." Upon coming to the cliff, she asked: "Are you my father?" The cliff denied this saying: "I am not your father." The child returned to Hina and begged: "Tell me of my father." "Yes, you go to that bambu bush, that is your father." When she arrived at the place, she asked the bambu bush: "Are you my father?" "I am not your father, Makiioeoe is your father, he has gone back to Kuaihelani." When Laukiamanuikahiki again arrived in the presence of her mother she said: "You have deceived me. Makiioeoe I understand is my father and he has gone back to Kuaihelani. You have hidden this from me." "Yes, he is your father, and he has left word that you must not come to him without a sign or you will have a terrible suffering. You have to go to him in a red canoe having red sails, red cords, red men and must be accompanied by a large canoe, a small canoe, large men and small men." Laukia-

[1] *Laukiamanuikahiki*, literally, bird-trapping leaf of Kahiki.

[2] Another story of an absenting father leaving tokens of identification for his unborn child.

[3] Red, the unmistakable evidence of royal rank.

[4] A foreknowledge, evidently, of the sex of his child.

[5] A duplicate of the Umi-a-Liloa story, except in sex of the child.

manuikahiki replied: "I am not going to remain, I am going in search of my father." "Yes, you may go, but you will have to suffer untold agony. Go until you come to two old women roasting bananas by the wayside. They are your grandmothers, for they are my own mother and aunt. Reach down and take away the bananas and let them search for them until they ask whose offspring you are, then tell them, 'Your own.' 'Ours from whom?' 'From Hina.' Then when they ask you, 'What brings you our lord[1] here to us?' Tell them, 'I want a roadway.'"

When she arrived in the presence of the old women she followed according to the instruction of Hina. At the conclusion the old women said: "There is a roadway; here it is, a bambu stalk. You climb to the top of it and when it leans over it will reach Kuaihelani." Laukiamanuikahiki then climbed to the top of the bambu stalk and sat there. The bambu then began to shoot up and when it had reached a great distance it leaned over until the end reached Kuaihelani. Laukiamanuikahiki stepped off the bambu and proceeded along the road until she met a girl whom she took as a friend. They then went along until they came to a flower garden. The flowers of this garden were all kapu; none were to string them into wreaths until they shall have been picked by the daughter of Makiioeoe; the flowers of the ilima,[2] the marigold and other flowers and also the maile vine. There were guards in the garden who were watching the flowers. Laukiamanuikahiki, however, reached out and picked the flowers, took the maile vines and broke them off. When they came to the pool of water, which had been kapued until it was first used by the daughter of Makiioeoe, Laukiamanuikahiki uncovered herself and plunged into the pool of water, when a turtle came up to her and began rubbing her back After she finished bathing she went up on the bank. When the guards saw what she had done, they said: "You are indeed a strange girl bathing in the pool of water which is kapued and reserved only for the king's daughter. You will indeed die."

When the guards arrived in the presence of Makiioeoe, they told him of all the girl's doings. Makiioeoe then ordered that wood be prepared for the girl and to pack it to the seashore where the umu was to be started the next day, for on that day the girl was to be killed. The guards then returned, took the girl by the hands, bound them at her back and led her to the pig house where she was tied, the guards standing watch over her that night.

That night her friend came and asked that she too be bound; but Laukiamanuikahiki said: "No, you must be at liberty so as to bring me food, meat and clothing." Her friend consented to this.

At midnight a bird perched on the house where she was being held; it was an owl. This owl was the supernatural aunt of Hina, who had come all the way from Kauai because she knew of the coming peril of her grandchild, and who had in its keeping the tokens that had been given by Makiioeoe to Hina by the means of which she was to be known or recognized upon her arrival at Kuaihelani.

---

[1] *Haku*, rendered "lord," is applicable to either sex; it signifies ruler, overseer, or other authoritative superior.

[2] *Ilima*, a *Sida* of which there are several species; a favorite flower for wreaths, and Oahu's chosen emblem. The introduction of the marigold reveals the modern authorship of this story.

The owl then called out to Laukiamanuikahiki:

Say! Laukiamanuikahiki,
The daughter of Makiioeoe,
The daughter of Hina,
Die you will, die you will.

Laukiamanuikahiki replied:

Thou wicked owl! Thou wicked owl,
Thus revealing my name
As Laukiamanuikahiki,
Daughter of Makiioeoe,
Daughter of Hina,
You are a deceiving owl.

This call and reply was repeated twice before the guards heard it, when they sat up and listened to the call and they understood the meaning conveyed by the owl in its call. At this one of the guards said to his companion: "Say, this must be Laukiamanuikahiki, the king's own daughter." The other replied: "No, this cannot be the one, for she was to come in a red canoe having red sails, red paddles, red men, a large canoe, a small canoe, large men and small men; these I understand are the things that should accompany her; this girl on the other hand is a poor girl for she has come without any of these things." The two again listened to the conversation between the owl and girl. After a while they agreed to go up and tell the king of the possibility of this girl being his daughter. They arrived at the home of Makiioeoe after midnight and roused him up saying: "Say, you wake up." "What is it?" said Makiioeoe. "There is an owl right over the pig house where the girl is held who called out to the girl in the following way:

Say! Laukiamanuikahiki,
Daughter of Makiioeoe,
Daughter of Hina,
Die you will, die you will.

The girl then answered:

Thou wicked owl! Thou wicked owl,
Thus revealing my name
As Laukiamanuikahiki,
Daughter of Makiioeoe,
Daughter of Hina,
You are a deceiving owl.

This was the conversation carried on between the two. "Yes, she is my daughter, Laukiamanuikahiki." The king then accompanied by the guards proceeded to the place where they were stationed when they heard the conversation, and Makiioeoe sat down and listened for the call of the owl and for the girl's reply.

At the conclusion of the conversation between the owl and the girl, the king knew this was his own daughter, Laukiamanuikahiki. He then broke into the house took up his daughter and wept over her.

After the guards had departed to inform the king, the owl flew down and clapped its wings on the girl, placed the necklace of whale's teeth around the girl's neck, girded

a pa-u around her waist and placed the feather cloak over her. These being the tokens left by Makiioeoe in the keeping of Hina.

After it had become broad daylight, Makiioeoe ordered that the umu be started; when it was sufficiently heated the people who had ill-used the girl were then thrown into the umu and they all perished. The girl who befriended Laukiamanuikahiki was made a high chiefess and she lived with Laukiamanuikahiki. Soon after this a kapu was placed over Laukiamanuikahiki and she was forbidden from going out of her living house and no one was allowed to pass by her house or to speak to her. Laukiamanuikahiki was a very beautiful woman to behold and she had no equal in all the land of Kuaihelani, for her beauty could be seen on the outside of the house, like a bright light.

About this time Kahikiula the son of Makiioeoe by his first wife arrived from Kahikiku. This young man was married to Kahalaokolepuupuu of Kahikiku and had come to Kuaihelani without his wife on a visit to his parents. When Kahikiula arrived he was accompanied by his followers in a red canoe, with red sails, red cords, red paddles, red men, large canoes, small canoes, large men and small men.

Upon the arrival of Kahikiula at Kuaihelani he was met by his mother and father and all the people. Soon after this Makiioeoe requested Kahikiula to go and meet his sister, Laukiamanuikahiki, which invitation was accepted. When they were near the house, Kahikiula looked and saw a bright light on the outside of the house; so he said to Makiioeoe: "Say, your house is on fire!" Makiioeoe replied: "That is not a fire, it is some person sleeping within, it is your sister." They then entered the house and Makiioeoe approached the bed and roused his daughter saying: "Wake up, here is your brother Kahikiula." Laukiamanuikahiki awoke from her sleep and turned down on her breast. She then looked up at Kahikiula and greeted him.[1] What a sight it was to behold these two; one was as handsome as the other was beautiful; both were equal in good looks, Kahikiula and Laukiamanuikahiki.

At sight of this, Makiioeoe said to Kahikiula: "Now I request of you that you take her as your wife." That night they were covered by the same kapa. They lived as husband and wife for fifty days when Kahikiula begged that he be allowed to return to Kahikiku. Laukiamanuikahiki then said: "You cannot go unless you take me along with you." "It cannot be, for you will surely experience terrible suffering through the anger of your sister-in-law. You must remain, and I will return." As Kahikiula kept begging so often to return to Kahikiku, Laukiamanuikahiki finally consented and allowed him to go, saying: "Yes, you may return, but don't blame me if I should decide to follow you later on, or I will kill you and also your wife, Kahalaokolepuupuu." Kahikiula then took his departure and returned to Kahikiku to live with Kahalaokolepuupuu. Laukiamanuikahiki remained, but was so overcome with love for Kahikiula, that she wept; and when she saw the clouds drifting in the sky towards Kahikiku, she chanted the following lines:

The sun is up, it is up,
My love is ever up before me.
It is causing me great anxiety,
It is pricking me at my side
For love is a burden, when one is in love,
And falling tears are its due.

[1]Expressions of admiration.

When the desire became more than she could bear and the love for Kahikiula could not be put aside from her by day and by night, she decided to go to the seashore one day and weep there; and as her weeping came to an end she called out: "Ye turtle with your shiny back, my grandmother of the sea, come to me; here I am your grandchild, Laukiamanuikahiki, daughter of Makiioeoe and Hina."

At the close of the call a turtle with a shiny back approached her and opened up its back. Laukiamanuikahiki then entered into the turtle, the top was closed and the turtle dove under water and swam until it arrived at Kahikiku. Upon its arrival at Kahikiku the turtle uncovered its back and Laukiamanuikahiki walked out on the seashore, while the turtle disappeared. Laukiamanuikahiki then went on her way until she came to a fish pond which belonged to Kahalaokolepuupuu, the wife of Kahikiula. At this place Laukiamanuikahiki changed herself into the form of an old woman and concealed her identity by calling out:

Ye forty thousand gods,
Ye four hundred thousand gods,
Ye rows of gods,
Ye collection of gods,
Ye older brothers of the gods,
Ye four-fold gods,
Ye five-fold gods,
Take away my good looks and keep it concealed.
Give me the form of an old woman, bowed down in age and blear-eyed.

At that very moment she was transformed into an old woman wandering along the seashore with a stick in her hand picking out sea-eggs.

Within this fish pond owned by Kahalaokolepuupuu, were kept the aholehole,[1] nehu,[2] iao,[3] and all fish of this species and moss. Through the supernatual powers of Laukiamanuikahiki all the fish in the pond disappeared, which left the pond without a single fish. While she was crawling along the seashore two messengers from Kahalaokolepuupuu arrived and called out: "Say, you old woman, you have taken all the queen's fish. You are a thieving old woman." She replied: "I did not take them. The fish from this pond disappeared long before this; but since you have seen me here you are attributing their disappearance to me." At this time she was given a new name, Lipewale, by the messengers. They then said to the old woman: "Let us go to the house, your name, Lipewale, is that of the queen's sickness." When they arrived at the house, one of the messengers said: "There is not a single fish in the pond, all have been taken by this old woman. When we found her she was taking the sea-eggs." Kahalaokolepuupuu then addressed the old woman saying: "I am going to call you Lipewale, the name of my ailment. You will take this name, will you not? I will supply you with food, clothing, house to live in and you will live with me."

That night when they retired, Kahikiula approached the place where Lipewale was sleeping and kissed her. She then cried out: "Who is kissing me?" Upon hearing this Kahalaokolepuupuu called out: "What is it, Lipewale?" But she would not answer. In doing this Kahikiula showed that he had recognized his sister, Laukiamanuikahiki.

[1] *Aholehole*, a small white fish (*Kuhlia malo*).
[2] *Nehu*, silversides (*Atherina*).
[3] *Iao*, very small fish.

This was carried on for several nights. Whenever she knew that her brother and sister-in-law were about to retire together, she would get up and rattle the calabashes forcing her sister-in-law to come and ask her reason for thus creating a disturbance; when she would say, that it was a rat; she did this because she did not want them to sleep together.

One day Kahalaokolepuupuu said to Laukiamanuikahiki: "Say, Lipewale, let us go up and get some kukui nuts to print my pa-u with." Lipewale consented to this. When they arrived at the place, they collected the kukui nuts and put them into a bundle. After this was done Kahalaokolepuupuu said to Lipewale: "You will have to carry our bundle of kukui nuts." "Yes, I will take it." The others then went on ahead leaving Lipewale behind with the bundle of nuts tied to her back. After she started on her way, she put her hands behind her back, opened the bundle and allowed the kukui nuts to drop on the road. When they arrived at the house all the nuts were gone. Upon being questioned: "Say, Lipewale, what has become of your kukui nuts?" She answered: "You fixed the bundle and I put it on my back and followed behind you. I have no eyes at my back to see whether the nuts were falling out of the bundle or not."

After this Kahalaokolepuupuu said to Lipewale: "You will have to stay home and print my pa-u while the rest of us go down and have a sea bath." Lipewale was therefore left behind to print the pa-u. She first went out and got some filth and came back and proceeded to carry out the order by smearing the bambu sticks lengthwise and crosswise and began the printing of the pa-u. This did not take very long, so she followed along behind the others and went in sea bathing. On the way down to the sea, she caused herself to be transformed back to her usual self and she again possessed all her beauty. She continued on down and when she was near the others she passed on by and bathed at some distance from them. When she was finished she went right along up home. When the others saw her returning home they chased on behind, but they could not catch up and she arrived at home some time before the others, when she was once more transformed into the form of an old woman. When the others arrived at home, they asked her: "Say, did you see a beautiful woman who came up this way from below?" "No, I have not seen her. I have been sitting out here all this time until you returned." After the others had gone to the dancing house she remained with her brother Kahikiula. She went outside of the house and called out:

Ye forty thousand gods,
Ye four hundred thousand gods,
Ye rows of gods,
Ye collection of gods,
Ye four thousand gods,
Ye older brothers of the gods,
Ye gods that smack your lips,
Ye gods that whisper,
Ye gods that watch by night,
Ye gods that show your gleaming eyes by night,
Come down, awake, make a move, stir yourselves,
Here is your food, a house.

At that very moment her beauty was restored to her, while the gods set fire to the dancing house, consuming the house, her sister-in-law and all the people who had insulted her; they all perished.

After this Kahikiula called out to his sister: "Come in, Laukiamanuikahiki." She refused, saying: "I will not come to you, for you have caused me to suffer in your own home. Here I am returning to Kuaihelani."

In this legend, it is seen that it was not considered wrong for a brother to take his sister to wife. It is also seen that they also suffered in those days just as we do in these days. They also hated one another and in fact lived as we now live.[1] Therefore these customs of days gone by are guidings for after generations.

[1] This legend closes with a mis-statement of modern life resembling in all respects that of ancient times in the effort to show that human nature is the same. Civilization, law and order and education overcame pagan customs many years before the foregoing was written.

HAWAII - TORTOISESHELL FISH HOOKS p143 NO MENTION of MOKUPAPAPA 259pp

landings being made, and on 26 September 1774 Kunie, to the south of New Caledonia. On 10 October 1774 he discovered Norfolk Island, to the north-west of New Zealand, a landing being made. On this voyage Cook also proved that there was no great continent in the South Pacific between Australia and America north of the Antarctic pack ice.

38. James Cook's Third Voyage, and Charles Clerke

In the years 1777–9 James Cook was again in the Pacific, on his third and last voyage, this time as the commander of an expedition of two ships, the *Resolution* and the *Discovery*. After his death in the Hawaiian Islands on 14 February 1779 Charles Clerke assumed the command. Under him the expedition made the first firm record of some islands. The authorities for this voyage are the journal of Cook until shortly before his death, and thereafter the journal of James King, a senior officer of the expedition.[1]

Having come to New Zealand from the west, Cook, on 25 February 1777, sailed for the Society Islands. The winds were variable, and it was not till 29 March 1777 that land was seen. It proved to be a small inhabited island, appearing to be about 5 leagues in circuit, of moderate height. Omai, Cook's Tahitian interpreter, had some conversation with some of the inhabitants in a canoe and at the shore edge. The name given by them to the island was Mangya or Mangeea. Its position was taken as latitude 21° 57′ S., longitude 201° 53′ E.

This was Mangaia, in the southern Cook Islands, corresponding in position and topography to Cook's detail.

The little that was seen of the Mangaians appeared to show that they were like the Tahitians and Marquesans, their language being a dialect of the Tahitian, although, like the New Zealand, more guttural in pronunciation. One house seen near the beach resembled those of Tahiti. The islanders did not have pigs or dogs, but knew their names. They said they had plantains, bread-fruit,

[1] Cook, J., and King, J., *A Voyage to the Pacific Ocean* (London, 1784).

and taro. They saluted strangers by rubbing noses as in New Zealand, with the additional ceremony of taking the hand of the other person and rubbing it on their nose and mouth. The only canoe seen was a narrow one, and was paddled. A man with a scar on his face said he had sustained the wound in fighting with people from an 'island' to the north-east who sometimes invaded them, but since the usual Tahitian words were used indifferently for people, islands, or lands, and there are no historical records of contacts between Mangaia and islands to the north-east, the reference was presumably to internal warfare with the north-eastern sector of Mangaia, which is well documented by later references.[1]

Leaving Mangaia on 30 March and proceeding north, the next day, 31 March 1777, Cook discovered another island, with a smaller island to the north-west. The larger island was about 6 leagues in circumference, and was a beautiful spot, with a surface composed of hills and plains. Its name was given as Wateeo by the islanders. The position was taken as latitude 20° 1′ S., longitude 201° 45′ E.

This was Atiu in the southern Cook Islands, the small island being Takutea, 10 miles to the north-west of Atiu.

A landing party including Omai went ashore at Atiu. The people had, in addition to the products mentioned at Mangaia, pigs, but not dogs. Red feathers were worn by the people of rank, also necklaces of two small bone balls on a cord. Both sexes practised tattooing. Their general dress was a piece of cloth or mat wrapped round the waist, but some wore a sort of jacket without sleeves, and others a conical cap of coconut core, interwoven with small shelly beads. Some of the men were armed with clubs and spears of varying sizes. Both single canoes with outriggers, and double canoes, were seen, some with elaborate black markings in squares and triangles. The visitors were entertained to a repast of baked plantains and pig, and Omai drank a ceremonial draught of kava with the chiefs.

A landing was made on Takutea, where no inhabitants were found.

[1] Williams, J., *Missionary Enterprises* (London, 1837), pp. 242–4; Gill, W. W., *Life in the Southern Isles* (London, 1876), pp. 148–9.

The Discovery of the Pacific Islands 1960 OXFORD at the Clarendon Press

Cook came west from the Cook group to Tonga. Here, on 16 May 1777, he gave the first firm record of the eastern islands of the Haapai sector, Uoleva, Lifuka, Foa, and Haano, some or all of which were probably seen by Duclesmeur as he skirted the group on its west side (see section 34).

From Tonga Cook came east for the Society Islands. On 8 August 1777 an island with hills was discovered. Its greatest extent in any direction was not above 5 or 6 miles. Its position was taken as latitude 22° 15′ S., longitude 210° 37′ E. Some men in canoes said the name of the island was Toobouai.

This was Tubuai in the Austral Islands, answering in position and description to Cook's data.

The men in the canoes were of the same people and language as the Tahitians. They had only a loincloth as covering, but some of those seen on the beach were entirely clothed with a kind of white garment. Some of the islanders wore pearl-shell necklaces. One kept blowing a large conch shell. Their canoes, which appeared to be about 30 feet long, were single paddling canoes with outriggers, well carved, the sides being decorated with flat white shells disposed nearly in concentric semicircles with the curve upward. No weapons were seen.

After some time in the Society Islands, where Omai remained, the expedition set out for the North Pacific, where Cook had instructions to look for a passage to the Atlantic. On 24 December 1777 a low lagoon island was discovered. Landing parties found it uninhabited. It appeared to be crescent-shaped, and about 15 or 20 leagues in circumference. On the west side the position given was latitude 1° 59′ N., longitude 202° 30′ E. Cook called it Christmas Island.

This was Christmas Island, in the mid-Pacific area, a detached atoll answering to Cook's position and other details.

On 2 January 1778 Cook resumed his course to the north. There was a gentle breeze at east and east-south-east till the latitude of 7° 45′ N., then one calm day, succeeded by a north-east by east and east-north-east wind which freshened as they advanced to the north. On 18 January 1778 two high islands were seen. The next day, 19 January 1778, when Cook was some distance to the south of the second of these islands, a third was seen to the west-north-west. The ships anchored at the second island, the native name of which was stated by the inhabitants to be Atooi. The name of the first island seen on 18 January

1778 was Woahoo, the latitude according to Cook being 21° 36′ N. There were actually three islands near Atooi on the west side, called by the people of Atooi Onecheow, Orechoua, and Tahoora, all of which were seen by Cook, and of which Onecheow, being much the largest, must have been part or all of the land seen as the third island on the 19th. Just when the smaller islands Orechoua and Tahoora were first seen is not clear. The five islands seen by Cook were placed by him between latitudes 21° 30′ and 22° 15′ N., and longitudes 199° 20′ and 201° 30′ E.

These were the islands Oahu (Woahoo), Kauai (Atooi), Niihau (Onecheow), Lehua (Orechoua), and Kaula (Tahoora) in the Hawaii group.

After visiting Niihau as well as Kauai, Cook went north and explored the North American and Behring Strait area. He returned south, and on 25 November 1778, at daybreak, land was seen to the south. At 8 a.m. the ships were 2 leagues distant from its northern coast. The summit of an elevated saddle hill appeared above the clouds. The ships sailed west along the northern coast. At noon they were near a low flat like an isthmus. Here the position was taken as latitude 20° 59′ N., longitude 203° 50′ E. They did not go farther west, having made contact with some islanders in canoes. In the evening, the horizon being clear to the west, the westernmost land in sight was judged to be a separate island. Cook came back east along this coast. On 30 November 1778 another island was discovered. The name given by the inhabitants was Owhyhee, and to the island first seen on the 25th, Mowee. Snow lay on the high land of Owhyhee. Having rounded this island on the east and south sides, the ships anchored in a bay on its west coast called by the inhabitants Karakakooa.

Mowee was Maui in the Hawaii group. The *Pacific Islands Pilot* says it consists of two sectors joined by a low, flat isthmus, and that the crater of Haleakala in the eastern sector, rising to 10,025 feet with a large gap or opening on its northern side, is often seen above the clouds. The position given by Cook when near the low flat like an isthmus is a point close to the north side of the low isthmus between the two sectors of Maui. Molokai, an island about 7½ miles north-west of Maui, rises to 4,970 feet.[1] It is evident, therefore, that Cook, having come to the eastern part of Maui and seen Haleakala, sailed west as far as the low, flat isthmus

[1] *Pacific Islands Pilot*, vol. iii, pp. 240, 246, 256.

which divides the two high parts of Maui, and saw Molokai to the west. There is no reason to believe that Lanai, which lies west-south-west of the north-western part of Maui, was seen at this time. Owhyhee was the island of Hawaii, about 26 miles south-west of Maui, Karakakooa, where the ships anchored on the west side of Hawaii, being Kealakakua Bay.

Cook's journal ends at the arrival at Kealakakua Bay on 16 January 1779, and King takes up the story.

Cook, on 4 February 1779, left Kealakakua Bay and made north, intending to finish the survey of the island of Hawaii. The ships made slow progress on that day and the next because of calm weather. Before they were past the north-west of the island the foremast of the *Resolution* was found to be sprung by bad weather, and on 8–10 February 1779 they made back to Kealakakua Bay. Here Cook, on 14 February 1779, was killed, being succeeded in the command by Charles Clerke. On 22 February 1779 the expedition left for Maui. On 24 February 1779, as King relates, they passed a small barren island called Tahoorawa 7 or 8 miles south-west of Maui and stood for the passage between Maui and an island called Ranai. At noon the position was taken as latitude 20° 42′ N., longitude 203° 22′ E., with Tahoorawa, Ranai, and Morotai in sight. During the day people came off in canoes and traded produce to the ships. The only further point of relevance in the expedition's further traverse of the Hawaii group under Clerke was a contact with Oahu, where after sailing round its north-east and north-west coast a brief landing was made on the north-west side on 27 February 1779. On what he saw King considered this to be the finest island in the group.

Tahoorawa, Ranai, and Morotai were Kahoolawe, Lanai, and Molokai. Molokai had been seen on 25 November 1778 from the north coast of Maui. Kahoolawe is an island with peaks of nearly 1,500 feet 6 miles west-south-west of the south-western extremity of Maui, and about 36 miles from the north-western part of Hawaii, while Lanai, which lies about 15 miles north-west of Kahoolawe, reaches a height of 3,370 feet.[1] Whether Kahoolawe, and possibly Lanai also, were seen when the expedition came north the first time from Kealakakua Bay under Cook is not clear. The first firm record of them is King's reference under date 24 February 1779.

[1] *Pacific Islands Pilot*, vol. iii, pp. 252–4.

Cook and King between them give copious details of the people of the Hawaiian Islands—called by Cook the Sandwich Islands—derived from the expedition's contacts, either on land or with people who came out in canoes or both, at Kauai, Niihau, Maui, Hawaii, and Oahu.

The appearance, language, arts and crafts, and ways of life of the people in all these islands were substantially the same, and there were many indications that they communicated freely with one another both in friendly exchanges and in warfare. In these things the Hawaiians showed a close similarity to the people of the Society Islands, Tonga, and New Zealand.

The foods of the commoners were principally fish, yams, sweet potatoes, taro, plantains, sugar cane, and bread-fruit, to which the people of higher rank added the flesh of pigs and dogs. Flesh food was salted for taste and not preserving. Fowls were also used for food but were not much esteemed. A sour taro pudding was used as at Tonga. The Hawaiians did not have the art of preserving bread-fruit in a sour paste as at Tahiti, and the Englishmen showed them how to do this. The cooking was of like manner to that at the southern islands. Kava was extensively drunk by the chiefs.

One thing in which the Hawaiians resembled the people of New Zealand rather than those of Tonga or the Society Islands was in living together in villages, although there were also straggling houses. The houses of the villages were built close together without any order. The houses had low sides and low entrances, the only light coming through the latter. They were kept very clean, with dried grass on the floor, on which sleeping mats were spread. A kind of bench at one end held their few utensils, consisting of gourds, some of which were very big, and some lacquered, and wooden bowls and plates, often well carved. There were wooden pillows.

The Hawaiian mats and cloth, the latter made from the bark of trees, were beautifully worked in a variety of patterns and colours, being in King's opinion unexcelled anywhere else in the world.

The Hawaiian fish-hooks were ingeniously made of mother-of-pearl, bone, or wood, pointed and barbed with small bones or tortoise-shell. A common type was made in the form of a small

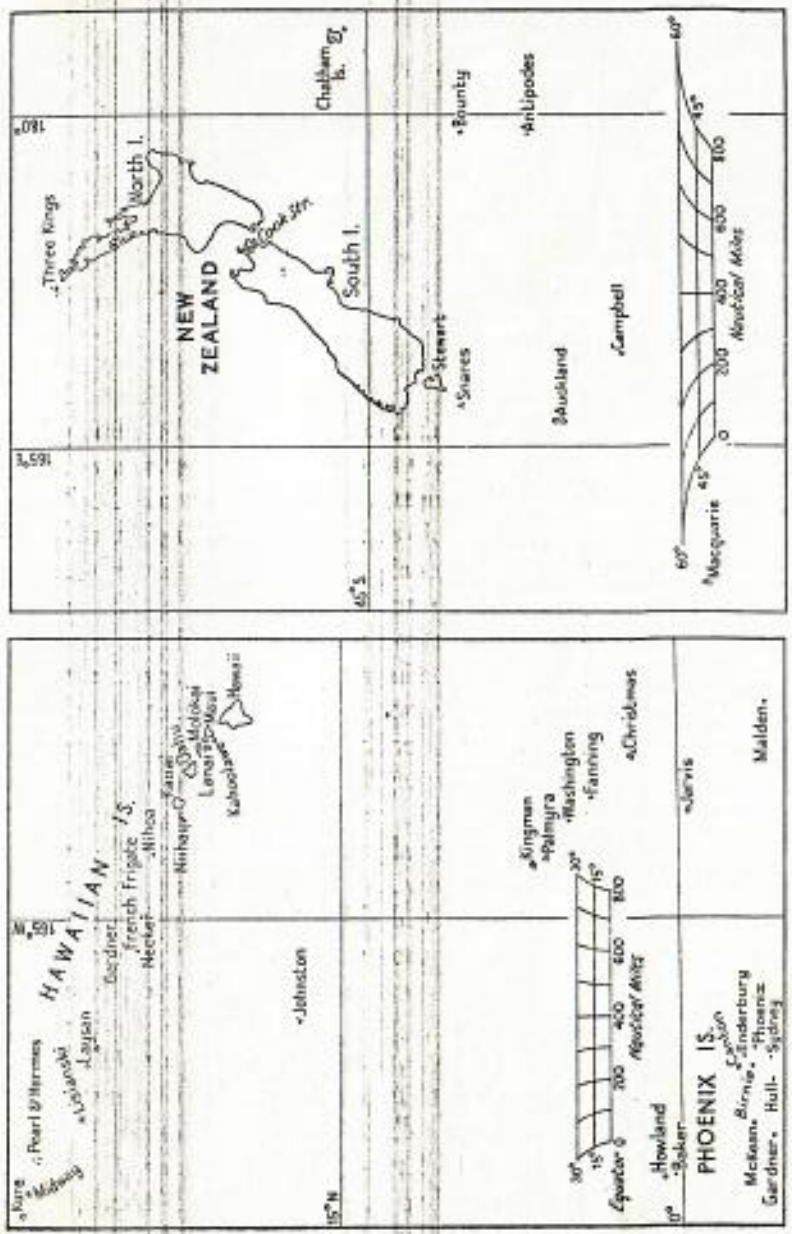
fish with feathers attached. The lines, cordage, and nets, made from bark or coconut fibre, were very strong.

The adzes were of the same pattern as those of the southern islands, and either made of the same sort of blackish stone, or of a clay-coloured one.

The men wore the *maro* or loincloth. They used beautifully manufactured mats as a protection in war, drawn round the shoulders and in front. Striking helmets and mantles were used as ceremonial dress by the chiefs, the helmets, made of covered wickerwork fitting the head closely, and with a ridge from back to front which would act protectively against blows, being like those formerly worn by the Spaniards, the mantles being magnificently feathered in red or yellow, or in white with variegated borders. The ordinary dress of the women resembled that of the men, but they sometimes wore loose pieces of fine cloth over their shoulders in the evening, and the younger women frequently wound thin, fine cloth several times round the waist so that it looked like a full short petticoat.

Both sexes wore necklaces made of strings of variegated shells, also neck pendants in the form of a handle of a cup, or a small human figure made of bone, hung on a cord. Fly-flaps of coconut fibre or feathers tied to the top of a handle were used, the most valuable form of handle being the arm or leg bone of an enemy slain in battle. Bracelets of shell, black wood, pigs' or boars' teeth were worn. The women wore wreaths of dried flowers of the mallow, and another beautiful ornament called *eraie* (*lei*), generally about the neck, sometimes round the hair, sometimes both made like a ruff, of very small feathers so close together that they resembled velvet, the ground being generally red, with alternate circles of green, yellow, and black. An ornament of shells or dogs' teeth or red berries was tied round the arm or ankle or below the knee when dancing, so that it made a noise during the movements. A kind of mask made of a large gourd, with holes for the eyes and nose, was seen on two occasions, being apparently worn for fun.

The weapons were wooden spears, daggers, clubs, and slings. One sort of spear about 6 to 8 feet in length tapered to a point



Map 6. The New Zealand Area

Map 5. Hawaiian Islands and Phoenix Islands

furnished with four or six rows of barbs; another was 12 or 15 feet long and not barbed. The daggers, 1 to 2 feet long, had a string through the handle whereby they were hung from the arm.

The canoes consisted of a base of a single piece or log of wood hollowed out to the thickness of 1 or 1½ inches, with three boards as sides. They were not more than 15 or 18 inches broad, and were either provided with an outrigger or fastened together in pairs. They were rowed by paddles and sometimes had a light triangular sail. The head chief of Hawaii had a double canoe 70 feet in length, 3½ feet in depth, and 12 feet in breadth, each being hollowed out of one tree.

The men were frequently tattooed, the quantity of it varying considerably. Only at New Zealand and the Hawaiian Islands, according to King, did the people tattoo the face, and as between the two latter, the New Zealanders employed elegant spiral volutes, while the Hawaiians used straight lines at right angles.

Several *morai* (*marae*), or sacred enclosures, were inspected by Cook and King. They consisted of stone platforms, on which were pyramids covered with white cloth, wooden frameworks, and figures of gods and chiefs. Chiefs were buried here with the bodies of slain common people. The priests appeared to be a special hereditary order.

The chiefs were highly autocratic towards the commoners and to chiefs inferior to themselves, but the property of the people appeared to be protected by usage.

The making of canoes and mats was a chiefly occupation, the women were employed in making cloth, and the commoners in the plantations and fishing.

Many forms of recreation were indulged in. The people were expert swimmers, and the men competed in riding surf-boards. They had boxing and wrestling matches, although inferior to those at Tonga. No grand ceremonial dances such as those of Tonga were seen, although it seemed probable they had them on occasion. The Hawaiian music was also ruder than the Tongan. Neither flutes nor reeds nor instruments other than drums were seen. Their songs, in parts and with accompanying gentle motions of

the arms, were very pleasing. The dances performed by women started gently and worked up into a climax like the New Zealand dances. The people had gambling games, and bet on racing matches between the boys and girls.

The people of Kauai and Niihau recognized iron. Only a piece of iron hoop about 2 inches long, fitted into a wooden handle, and another edge tool, was seen, at Kauai. Cook conjectured that the iron might have come from jetsam, such as hooped casks or bits of wreckage from the Spanish American coast. A bit of fir wood which was supposed to have come as jetsam was seen. Colour was later given to Cook's explanation by the fact that when the ships were again at Kauai after Cook's death, an islander showed them a bolt which appeared to be of some ship's timbers and was not of English make, and which, if they comprehended the islander aright, had come out of a piece of timber driven on the island since their previous visit. Cook and King were sure that if the Spaniards had known of the existence of Hawaii they would have used it as a stopover on their voyages to the East Indies.

James Cook's contributions to the discovery of the Pacific Islands on his third voyage were as follows: On 29 March 1777 he discovered Mangaia in the southern Cook Islands. On 31 March 1777 he discovered Atiu and Takutea in the southern Cook Islands, landings being made on both. On 16 May 1777 he gave the first firm record of the eastern islands of the Haapai sector of the Tonga Islands, namely Uoleva, Lifuka, Foa, and Haano, landings being made; some or all of these islands had probably been seen by Duclesmeur (see section 34). On 8 August 1777 Cook discovered Tubuai in the Austral Islands. On 24 December 1777 he discovered Christmas Island in the mid-Pacific area, landings being made. On 18 January 1778 he discovered Oahu and Kauai in the Hawaiian Islands, landings being subsequently made on Kauai. On 19 January 1778 he discovered Niihau, and on that day or shortly thereafter Kaula and Lehua, in the Hawaiian Islands, landings being subsequently made on Niihau. On 25 November 1778 he discovered Maui and Molokai in the Hawaiian Islands. On 30 November 1778 he discovered Hawaii in the

Hawaiian Islands, landings being subsequently made. Cook may have seen Kahoolawe or Lanai or both, also in the Hawaiian Islands, on 6–8 February 1779.

Charles Clerke having succeeded to Cook in command of the expedition, the first firm record of Kahoolawe and Lanai was given on 24 February 1779, and a landing was made on Oahu on 27 February 1779.

39. Francisco Antonio Maurelle

Francisco Antonio Maurelle, a Spanish captain, went with secret papers from the Philippines to North America in a vessel named *La Princessa* in 1780–1. It was the wrong time of the year for a passage by the ordinary North Pacific route and Maurelle tried unsuccessfully to reach the Americas through the South Pacific, finally having to come up to Guam and go on to North America from there. On this detour he made some discoveries. Maurelle's account of this voyage, secured by the French explorer La Pérouse (see section 40), was published with the latter's papers.[1]

On 7 January 1781 Maurelle, while making for New Ireland, passed an extensive cluster of small islands, twenty-nine of which were counted, with others in sight to the south. Maurelle identified these correctly as encountered by Bougainville (see section 32), namely the Ninigo Islands, which number some fifty islets in all. Quitting these islands, Maurelle, at 5 or 6 leagues, on 8 January 1781, saw two islets which he named Los Eremitanos (Hermits), and on the evening of the same day saw two islands to the north and west, distant 5 miles, which he identified with Bougainville's Anachorètes, the latitude being precisely the same, at the same moment seeing two small islands to the east, which he called Los Monges (The Monks). He passed south of them at midnight. On 10 January he passed a very large high island with smaller islands beyond it, which were plainly the Admiralty Islands including Manus.

[1] *Voyage of La Pérouse*, ed. Milet-Mureau, M. L. A. (London, 1798), vol. i, pp. cxv–clxiii.

Hawaiian Antiquities
David Malo
Bishop Museum Press, Hon. Hawaii 1951

10. If it was indeed Wakea who instituted this tabu then it was a very ancient one. It was abolished by Kamehameha II, known as Liholiho, at Kailua, Hawaii, on the third or fourth day of October, 1819. On that day the tabu putting restrictions on eating in common ceased to be regarded here in Hawaii. The effect of this tabu, which bore equally on men and women, was to separate men and women, husbands and wives from each other when partaking of food.

11. Certain places were set apart for the husband's sole and exclusive use; such were the sanctuary in which he worshipped and the eating-house in which he took his food. The wife might not enter these places while her husband was worshipping or while he was eating; nor might she enter the sanctuary or eating-house of another man; and if she did so she must suffer the penalty of death, if her action was discovered.

12. Certain places also were set apart for the woman alone. These were the *hale pea*, where she stayed during her period of monthly infirmity—at which time it was tabu for a man to associate with his own wife, or with any other woman. The penalty was death if he were discovered in the act of approaching any woman during such a period. A flowing woman was looked upon as both unclean and unlucky (*haumia, poino*).

13. Among the articles of food that were set apart for the exclusive use of man, of which it was forbidden the woman to eat, were pork, bananas, cocoanuts, also certain fishes, the *ulua, kumu* (a red fish used in sacrifice), the *niuhi* shark, the sea turtle, the *e-a* (the sea turtle that furnished the tortoise shell), the *pahu*, the *na-ia* (porpoise), the whale, the *nuao, hahalua hihimanu* (the ray) and the *hailepo*. If a woman was clearly detected in the act of eating any of these things, as well as a number of other articles that were tabu, which I have not enumerated, she was put to death.

14. The house in which the men ate was called the *mua;* the sanctuary where they worshipped was called *heiau*, and it was a very tabu place. The house in which the women ate was called the *hale aina*. These houses were the ones to which the restrictions and tabu applied, but in the common dwelling house, *hale noa*, the man and his wife met freely together.

15. The house in which the wife and husband slept together was also called *hale-moe*. It was there they met and lived and worked together and associated with their children. The man, however, was permitted to enter his wife's eating house, but the woman was forbidden to enter her husband's *mua*.

16. Another house also was put up for the woman called *hale kuku*, the place where she beat out *tapa* cloth into blankets, into *pa-u* for herself,

17. The following sea animals have a great resemblance to each other: the sea turtle or *honu*, from whose shell is made an instrument useful in scraping *olona* bark, also in making haircombs in modern times; the *e-a*, a species of sea turtle, whose shell was used in making fish-hooks. The *honu* is excellent eating, but the flesh of the *e-a* is poisonous.

18. The *mano* or shark has one peculiarity, he is a man-eater. His skin is used in making drums for the worship of idols, also for the *hula* and the *ka-eke-eke* drum. The *ka-ha-la* and the *mahi-mahi* are quite unlike other fishes. Their flesh is excellent eating.

19. The following are fish that breathe on the surface of the ocean: the porpoise or *na-ia*, *nuao*, *pa-hu*, and the whale (*ko-ho-la*). The *kohola* or whale was formerly called the *pa-lao-a*.[7] These fish, cast ashore by the sea, were held to be the property of the king. Both the *honu* and the *e-a* come to the surface to breathe.

20. The following fish are provided with (long fins like) wings: the *lolo-au ma-lolo* (the flying fish), the *puhi-kii* (*puhi-ki* is a mistaken orthography), *lupe*, *hihi-manu*, *haha-lua*, and the *hai-lepo*. These fishes are all used as food, but they are not of the finest flavor. No doubt many fish have failed of mention.

Notes on Chapter 15

[1] Sect. 1. From *ia*, the *k*, which still remains in its related form *i-ka* of the Maori language, has been dropped out; its grave is still marked, however, in the Hawaiian by a peculiar break, the result of a sudden glottic closure (*i'a*). It means primarily fish; also any kind of meat or animal food, and in the absence of these, any savory vegetable, which as a relish temporarily takes the place of animal food, is for the time spoken of as the *i-a* for that meal. Thus it is common to say, *Iuau* was our *ia* on such an occasion. Even salt, *paa-kai*, is sometimes spoken of as the *ia* for a particular meal or in time of want. In the Malay language the word for fish is *ikau*.

[2] Sect. 5. *Alamihi* is a small crab, also called the *ala-mihi*, spoken of as the corpse-eating *alamihi, ka alamihi ai kupapau*. In spite of its scavenging propensities this crab is eaten, and it was undoubtedly one of the means of spreading cholera in Honolulu in 1895.

[3] Sect. 6. All of these are *echini*. The spines of the *wana* are very long, fine and sharp as a needle.

[4] Sect. 6. In the *oopu-hue* the poisonous part is the gall. By carefully dissecting out the gall-bladder without allowing the escape of any of its contents, the fish may be eaten with impunity. Its flavor is delicious.

[5] Sect. 11. *Lau-hau* is named for its patches of gold and dark brown, resembling the ripe leaf of the *hau*.

[6] Sect. 15. The appearance of the *awaawa*, also called *ala-lau-a*, in large numbers about the harbor of Honolulu was formerly regarded as an omen of death to some *alii*.

[7] Sect. 19. The *palaoa* is the sperm whale.