

KAUAI AND
NA PALI COAST
1970s-1980s G.H. BALAZS

Kauai scientists on nests of rare

By Jan TenBruggencate

Advertiser Kauai Bureau

LIHUE — The first of six suspected Green Sea Turtle nests on a remote beach on Kauai's North Shore hatched last weekend in a year that has seen at least four recorded turtle nesting efforts at different Kauai beaches.

They mark an increase in turtle nesting activity after 15 or 20 years of virtually no nesting on the main islands, said Kauai aquatic biologist Don Heacock.

Most Pacific Green Sea Turtle nesting in Hawaii occurs in the uninhabited rocks and atolls of the Northwestern Hawaiian Islands, although such nesting was common among the main islands until 20 or more years ago.

The decline in nesting appears to have coincided with the decline in the numbers of the turtles, which are now protected under both state and federal statutes. It is unlawful to bother sea turtles in any way around Hawaii.

Heacock got a report from a camper that a turtle or turtles had been coming ashore beginning in June. The visits, each of which included nesting activity, occurred every two weeks and happened six times, Heacock said.

That led experts to suspect the turtle was a Hawksbill, which is also protected by federal law, since Green Sea Turtles on average only come ashore for nesting twice, although multiple nestings are not uncommon. Hawksbills often nest five or six times. Both do so at two-week intervals, laying from a few dozen to more than 100 eggs each time.

Heacock kept track of the first nest. The first hatchling

reached the surface of the sand from the nest 2 feet under 66 days after the nest was made. Green Sea Turtle average incubation time is 65.4 days, and can range from 54 to 88 days, Heacock said. The hatching activity ended after three days, as usual, and Heacock gave it two more days before he excavated the nest to determine for sure what kind of turtle it had been. (The young turtles emerge and make their dash for the sea at night, and were not seen. Only their small tracks remained.)

He found there had been 100 eggs, and that just 15 had hatched. The hatched ones were at the very top of the egg heap. Heacock said beachgoers reported there had been high surf that covered the nesting area five days after the eggs were deposited.

"They need oxygen, and there's enough coming through the damp sand for them, but if they are covered with water, they'll drown just like you or me," Heacock said. He opened the eggs and found most had stopped development within days of being produced. The ones on top probably were in better-drained sand, and thus were able to survive, he said.

The eggs were measured and found to be about the size of Green Sea Turtle eggs, which are generally slightly larger than those of the Hawksbill, he said. But the evidence isn't sufficient to be sure, he said.

Some of the other nests higher on the beach have not been inundated by water. Heacock said he hopes to see much better hatching results from those nests.

The new nesting activity is exciting for wildlife officials who have been recording the decline of the turtle population through the time it has been

keeping close eye Green Sea Turtles



Advertiser photo

Green Sea Turtles hatching.

protected, and who have been seeking evidence that the population is being restored.

More than 30 young Green Sea Turtles hatched at this time last year after they were saved by beachgoers near Barking Sands. High surf had uncovered their nest and the eggs were washed in the surf. Heacock hatched the eggs in a bucket of sand in his office, and later released them.

24 Aug. 82

George:

Enclosed, per your request, are copies of maps showing coastal areas from Barkling Beach to Haena. (note: copies of maps taken from 2 USGS Quad Maps: 1) Haena + 2) Mahaha Pt.)

I spoke with Tony Mahamura (Chief Enforcement Officer on Hawaii) about helicopter landings, turtle sightings, turtle remains, etc that you mentioned seeing during your stay at Mualolo Kai, etc. He responded by saying that he knows helicopters (illegally) land in that area + that someone undoubtedly ate the turtle (the remains of which you saw) and that soon (by within 1 yr?) the his Div. would be getting a larger boat so that the Na Pali coast can be more often + more efficiently patrolled.

Sam Lee overheard me talking to Tony + commented to me later that ~~outside~~ the area from Kihiaola harbor down to Waimea recreational pier and the Kaunakani area (outside the of dropoffs) ~~are~~ ^{are} areas where turtles can commonly be found sleeping (see attached pages - maps)

Mr. Mitane has not been in the office so I haven't spoken w/ him yet.

Aloha for now,
Don

August 29, 1982

Prepared by the staff of the Honolulu Star-Bulletin

Kauai



POLIHALE STATE PARK

At the western end of Kauai, at the end of a five-mile dirt road is the kind of beach that banktellers juggle the books for. A wide and long expanse of white sand on a wild coastline, the beach is used by Kauai residents but rarely by tourists because of the ukase against driving rental cars on unpaved roads.

The unpaved section is well marked but dusty, and, by Oahu standards, the beach is never crowded. Located at the dry, hot end of the island, the park almost always has sunny weather. During the day there is a splendid view of the high sea cliffs of Na Pali coast, and at dusk, brilliant sunsets.

There are 80 camp sites, for which camping permits are required and available in the Lihue office of the State Parks division. The area is equipped with barbecue pits and seven picnic shelters as well as a pavilion for larger groups. A permit is also necessary for pavilion use. In the event that the picnic shelters are all in use, it is wise to bring along a beach umbrella because there is no other shade.

Polihale has safe swimming except when there are high seas in the winter months. There is good shore fishing and some body surfing. Driving out, you will be in sight of the Barking Sands missile base where communication with the space shuttle is monitored. The barking of the sands is a quirky thing few people have heard, but under certain conditions, footsteps are said to sound like a small, yippy dog.

September 9, 1982

*Never
answered*

Mr. Sam Lee
Department of Land and Natural Resources
P. O. Box 1671
Lihue, Kauai 96766

Dear Mr. Lee:

Mr. Don Heacock of Aquatic Resources passed on to me the information you gave him about sea turtles along the Kaunakani-Kikialoa coastline of Kauai. I appreciated learning these facts and I am writing to thank you for your assistance. There are undoubtedly many things that you could tell me about your diving experiences with sea turtles. I look forward to meeting you in person one of these days so we can talk about these adventures. In the meantime, could you please write me a short note concerning the following questions.

1. Did you ever find metal tags attached to a turtle?
2. What was the most common size turtle (approximate weight) of the turtles you saw in this coastal area?
3. What depth were most turtles seen sleeping in caves in this coastal area?
4. Did you ever see any other species of turtles besides the green turtle (honu)?

I thought that you might like to have the enclosed identification poster showing the various species that occur throughout the world.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk

Received
1/27/78

George Elmore
R.R. 1 Box 102-A
Koloa, Hi. 96756

Mr. George H. Balazs
W. H. at Manoa
Box 1346, Kaneohe

Telephone -
742-1731

Dear Mr. Balazs,

Mr. Alex Irving of California forwarded to me your letter of Jan 6⁷⁸ re turtle observations at Poipu Beach, Kauai. He was visiting me at the time and that I could locate the spot more accurately for you.

The dot on enclosed chart is very close to the area under discussion. We see turtles almost every day at this spot covering an area of perhaps

40 feet ^{and} along the coast between
15 and 35 ft from the rocky
shore line. Mostly they come
 up for a momentary gulp
 of air only. Occasionally a
 baby will linger on the
 surface, but not for long.

I have no reason to believe
 they are feeding at these times.
 We do, however, seem to
 notice them more when the
 water is rough. ^{Breathe more?}

We are told by others
 who have lived here many
 years that this is the "turtle
 spot".

I have spent much time
 on the west coast of Mexico
 south of Cape San Lucas. Turtles

are very common in those waters. And there they seem to spend a lot of time on the surface. Not true here. Can you tell me why? Does the Hawaiian Green Turtle live entirely under water except when breeding?

Thanks for your booklet which is very educational. If I can be of any further help, please let me know.

Sincerely yours,
George E. Brown

G. Elmoe
RR 1 Box 102A
Koloa, Hi 96713

6/26/78

TURTLE SURVEY OF THE ISLAND OF KAUAI BETWEEN JUNE 6-JUNE 9, 1978

BY ALAN K. H. KAM*

June 6, 1978 - Tuesday

Aloha Airlines to Kauai, leave 0630. Weather over Kauai - cloudy and windy, rain over the mountains. Nawiliwili Harbor waters brown from runoff and choppy. 90% cloud cover. Pick up car in Lihue from American International (Kauai Sands Hotel/car package deal) and head to Kaakaaniu and Hanalei to look at water conditions. Attempted to go down dirt road to Kaakaaniu, too muddy for car rental. Talked to man in Chevrolet Blazer coming from coast along road - no houses built and road is very treacherous. Next road down, a cattle road, is unlocked but road is worse. Will go to Hanalei and Haena. After passing Kilauea Bay Lighthouse - closed till 1200 - visited an area called Anini, tide rising, a little bit of surf but water looks clean. Checked out small channel where in the past I had caught a turtle. Tomorrow will come here to snorkel and then SCUBA. Proceed to Hanalei, Princeville - Pepe St., and looking from the cliffs try to locate a trail down the cliff. The trail was found, will survey the area with SCUBA, water very clean, looks like an ideal spot for turtles - lots of patches of reefs, therefore ledges and turtles? Head to Haena, rainy, a few transients on road hitchhiking, locate Dolphin restaurant by side of road near Hanalei river. Reach end of the road, heavy water runoff has cut a 2-3' channel through the sand beach. One-two cars of tourist, no Zodiacs, a very peaceful scene, photographs taken. Turn around and visit "Sea Sage" a dive shop at Hanalei and then go to Kauai Sands, a hotel located on the beach next to "The Market Place," a trendy

* Accompanied by Mark Scheele, MOP student, University of Hawaii

Whalers Village-type tourist stop. Weather looks more cloudy, no patches of blue sky so I have decided to go cruising to Poipu-Spouting Horn area.

The water at Poipu was relatively calm, Spouting Horn quite peaceful and looked good for diving. Picked up two aluminum 80's at Sea Sage in Poipu, asked about turtles to the salesman (a black, who surfs and dives). He didn't know of turtles at Spouting Horn and only suggested that a few were seen at Koloa Landing. Went to Brennecke's for some body surfing and then back to the Kauai Sands.

June 7, 1978 - Wednesday

Setting up my dive gear I found out I forgot my weight belt (8 lbs). Luckily I had an extra (3 lbs) and Mark S. loaned me another 4 lbs along with his SCUBAPRO back buoyancy-compensator (push-button diving). We headed toward Anini at 0700, parked and donned our snorkel gear to first make a survey of the area.

A 1-3 foot breaking swell from the north was creating a current running toward Hanalei. By snorkeling through the surf, a fair amount of area was surveyed. 0745 Mark motioned to me to come to where he was floating. He had seen a turtle on the bottom, sitting on the rocks, 10-15 feet below. I could not locate the turtle but finally saw it as it swam out to sea. Carapace covered with calcareous algae, <20" length, not particularly curious of divers. We followed the coast toward Hanalei; the bottom that we surveyed mostly flat, little ledges, lots of manini and surgeonfish. Swam over an area that looks like the channel (deep enough for boats) created by the stream on land. Saw a larger turtle, clean shell, >20" length swimming toward shore, unable to follow it. Exited on the shallow reef flat and walked to the beach. Area covered about 2000-3000 feet.

Weather getting a bit more windy, tide rising. A tourist asks us about diving in this area; reply that it is fairly safe and then talk about turtles. Surface interval 45 minutes, don gear - push-button diving - air pressure in aluminum 80's=2800. Enter water in deep channel (15-20') where we snorkeled previously. Silty bottom, deep caves, no fish. This time we followed the channel to the right and as soon as we encountered the breakers made a 180° turn and headed to the first set of breakers on the left. Mark again saw the first turtle and as I tried to head it off, the turtle turned and swam away. It was just too fast for us (about 20', carapace overgrown with algae), Continued survey, as Mark entered a small cavern and as I proceeded above him I spied another turtle leaving the other end of the cave (about 20", algae covered). Air getting low so rather than exit further up the coast have decided to head straight in, through the rocks and surf. Exit time 1200.

Tide rising, water covering the reef flat and the weather deteriorating. I have decided to go to the south shore and perhaps survey Koloa Landing. Pick up four aluminum 80's at the Poipu Sea Sage and gather from the lady salesperson that the water on this side is clean and good for diving.

Enter water at Koloa Landing, easy entry and exit - a boat ramp, no fresh water. Inflate bacpacs and swim-kick out to the dive area. Large boulders immediately off of the Landing, becoming Porites lobata heads - very abundant. We have gone to the left, somewhat towards Kauai Sheraton and sunk to the bottom in about 30' of seawater. Am following the edge of the reef where it merges with the sand bottom. No coves or large overhangs but perhaps this might be a spot where a turtle might rest. Schools of C. miliaris, and in some of the darker holes, menpachi and aweoweo. Did not spot any cowries or lobsters. A few large jacks 3-5 lbs. Large coral heads 2-1/2 diameter Pocillipora lingulata, P. meandrina and large heads of Porites lobata. Bottom rock is composed of flat volcanic slabs. One turtle seen but too far away to get a good look at it. Exit 1500-1645, drop off empty tanks at Sea Sage with two filled ones for tomorrow's dive at Hanalei.

June 8, 1978 - Thursday

Wake up at 0600, gather up gear from bathtub and head to Hanalei, Princeville. Drive along main road, turn right at Pepe Street (?), first right will take you to overlook Princeville A; but follow road to Alii Kai, Kauai to some tennis courts and an empty lot. The trail begins there. Empty lot, down hill, left turn cross stream, up grass knoll and then climb down dirt and then climb down some lava boulders. And when you get to the lava bench, you realize that the water is another 6 feet below you and so an exit point must be found

Entered water and inflated backpack B.C. and kicked out on our backs. Very easy tool to use and helpful. Dropped down to a 30' bottom, many caves and overhangs. A hard bottom strata with many deep passages cut through it, sand bottom. Found an area with many rocks projecting out of the sand. I went through a passage exploring the ledge zone between sand and rock. Saw no turtles, but Mark S. who was following was able to grab a turtle that was wedged in a recess under the rocks. As we were gaining control of the

struggling turtle (I was holding the front flippers) a loud "pop" was heard. Perhaps the humerus popped out of the acromial process or the radii and ulnae junction. But whatever happened, the turtle's left front flipper suffered damage for the turtle was unable to react vigorously in that flipper. We swam to the surface, inflated the b.c.'s and back-kicked to shore. The injured turtle was placed on the lava and we again took to the water in search for a turtle. We dropped down into a roughly circular sandy area and explored the perimeter. (Note: Another turtle sighted, no particular information of the siting.)

Underneath a ledge, about 4 feet from the outside I found a turtle resting upon the sand. Its eyes were open, but was not moving to escape. Because of

my gear, it was necessary to use my bang stick to prod the turtle into moving closer to me. My first couple of jabs elicited no response and I had to try to go in deeper to grab the turtle. By knocking the shell a few times the turtle came toward me and I was able to grab it, though it involved the turtle hitting the ceiling and breaking segments of some plates. Exited the water to tag both turtles.

A. First turtle caught by Mark S.: injured left front flipper, length (c) 17", width (c) 15", tail, 3-3/8. Tag number #2501 RFL. #2502 RFL trailing clean shell, no barnacles, no skin barnacles. When released the turtle swam quickly away.

B. Second turtle caught by Alan K.: length (c) 18-7/8, width (c) 17-5/8, tail 3-1/8. Tag number #2503 RFL. #2504 LFL clean shell, between 4-6 marginal on right side there is an indentation. (Note: Amphipod sample taken from healing wound left hind flipper, delivered to Bill Cooke 6-10.)

Hiked up the hill, tide rising and water getting more rough. Went to Poipu to dive the right side of Koloa Landing. Picked up four tanks at Poipu, Sea Sage. No turtles sighted. Exit at 4:30 p.m. Drop off two tanks.

Evening: visit the Hanalei Courthouse for public hearing.

June 9, 1978 - Friday

0630 wake up, breakfast and then move out of hotel with all gear and baggage. Drive to Hanalei, Princeville A, hike down the cliffs and ready to dive 0900. Lose an o-ring by hitting regulator's first stage against top of cave. Changed in water and survey resumed. Missed a turtle as it came charging at me from a likely looking cave, bounced off the roof of the

cave, eluded my grasp and sped past Mark S. Another small turtle was seen swimming above me, unable to pursue it, the turtle got away.

Due to our flying later that afternoon, I decided to do some visiting; looked at Waimea Canyon and Kalalau Lookout. Leave Kauai 8:50 p.m.

Archaeologists Urge Preservation at Poipu

By Robert Pickard
Kauai Correspondent

KOLOA, Kauai—Four archaeologists last night urged the County Council to take stronger actions to preserve remnants of an ancient Hawaiian farming village at the site of a proposed 457-acre condominium and housing project in Poipu.

The location contains "extremely significant" archaeological findings, said Francis Ching, head of Archaeological Research Center of Hawaii.

These include over 500 structures reflecting the daily life of ancient Hawaiians and a complex irrigation system carved into lava rock that illustrates a highly developed technology, Ching told about 80 persons who attended a public hearing on the proposed project at the Koloa Neighborhood Center.

Moana Corporation, developer of the proposed Kiahuna Golf Village, might not be complying with state Land Use Commission requirements that significant archaeological sites be preserved, said Dr. Hallett Hammatt, an associate of Ching's who performed a surface study of the site.

"THERE ARE too many sites and not enough work being done on them," Hammatt said.

Moana attorney Walton Hong said the company has already spent \$100,000 on a surface archaeological study to meet the Land Use Commission condition and has agreed to leave five sites on about 10 acres of land untouched.

The developer would allow three months for an additional survey by qualified archaeologists but will not pay for it, he said. Archaeologists will be allowed on the project site "as long as they don't hold up the project," he said.

Dr. Hammatt's survey recommended a three-stage preservation plan that included restoration and salvage of other sites on the property, including excavation necessary to date and analyze the ruins, many of which are covered by brush and lava rock.

Ching said the more complete survey would cost about \$100,000 and take eight to 10 weeks of field work. Building the project and preserving

the archeological sites are not incompatible, he said, since excavation and salvage of about 25 percent of the property would turn up enough information to analyze the entire site.

DR. ROBERT Hommon, staff archeologist with the state Department of Land and Natural Resources, said the site is valuable enough to be eligible for placement on the Hawaii and National Registers of Historic Places.

H. David Tuggle, anthropology professor at the University of Hawaii at Manoa, said that preserving only parts of the entire community complex without salvaging and excavating other parts is like tearing pages out of a history book.

"What is left may have no meaning," he said. "We are destroying history."

It appears that the Council, which meets Tuesday, will approve zoning changes for the project, which includes 1,144 condominium units, 300 single-family houselots, a golf course and commercial center. It has the power to apply conditions that could require Moana to delay construction and fund another archaeological survey that would include in-depth salvage and excavation.

The developer is already committed to build a sewage treatment plant, pay for highway improvements, expand water lines leading to the area, provide 140 low-cost homesites and preserve two caves that are the habitats of rare insects.

Year round fun under the sun



Wailua Golf Course, one of Hawaii's most beautiful courses, is the location for many hours of recreation fun for local golfers.

Four fine golf courses

Princeville

A golf course already considered the best in Hawaii and one of the best new courses in the world is now available for play here on Kauai.

Named the Princeville Makai Golf Course, the 27-hole layout is an important part of the Princeville at Hanalei resort community on the north shore of Kauai.

Designed by Robert Trent Jones, Inc., Princeville Makai is situated on a gently rolling plateau overlooking the Pacific Ocean and Hanalei Bay and is backed by nearby mountains, all of which are in full view from practically every hole.

The championship course has three nines - Woods, Ocean and Lake-providing considerable variety within one course. Princeville Makai is designed so that any golfer, regardless of skill, will have an interesting and challenging round of golf in an unmatched setting.

The designer, Robert Trent Jones, Jr., says there are at least six "great" golf holes on the layout . . . holes that will compare with the best in the world.

Green fees for non-members are \$18 for 18 holes, \$22 for all day. Golf carts are \$12 for 18 holes (share basis) and \$18 for all day.

Kamaaina rates are available.

days a week plus bar and restaurant facilities.

The beautiful course looking over a long stretch of beach and scattered with palm trees has green fees of \$7 Monday through Friday, \$8 Saturday, Sunday and holidays or \$70 for a 30-day ticket for non-residents. Starting times are required every day.

Clubs are available at the pro shop with a rental of \$5 for 18 holes plus a \$5 deposit. Electric carts rent for \$8 with top and \$7.50 without top for 18 holes 7 days a week.

KAUAI SURF

Eighteen challenging holes . . . 6,808 yards with a par 72 . . . make up the Kauai Surf Golf Course, just above the hotel, with a beautiful view of Kalapaki Bay.

Green fees for 18 holes are \$10. Electric carts are required until 3 p.m. and rent for \$12.

There is a complete pro shop, with snack shop and bar.

KUKUIOLONO

The Kukuiolono Golf Course, 13 miles west of Lihue, is a golf park run strictly on the honor system. Green fees are \$4 daily or \$35 each month. Just stop by at the office and register, take an envelope from the book and place your green and other fees in it and drop the whole thing into the container.

The nine hole golf course in 300 acres of park has a pavilion at one end where you may sit and enjoy any lunch or refreshments you brought with you.

Park caretaker John Brun handles equipment rentals.

Cart rentals are handled on the honor system with electric carts at \$4 for 9 holes, \$18 for 18 holes, and hand carts are 50c. Mr. Brun will get a set of clubs for you and they will cost \$6 for 18 holes or \$3 for 9 holes. There is a small practice area between the 8th and 9th fairways which is posted with yardage markers.

In the office you will find a large sketch of the course and score cards are available on the desk.

WAILUA

The Wailua Golf Course and Country Club (phone 245-2163) has an 18 hole course open for play seven

Fishing . . .

Kauai boasts of some of the finest year-round fishing found in Hawaiian waters.

Powerful, tackle-smashing Yellowfin (Allison) Tuna slice through Kauai waters in the late spring. Weights run up to 300 pounds. Small Bonito, Mahimahi (Dolphin) and Marlin are also plentiful throughout the year.

Out-sized Bonefish are outstanding off Hanalei along the North shore. One of the finest Bonefish grounds is located there.

Octopus, Lobster, Crab, Clam, and Turtle may be hunted off the shores of Kauai AFTER carefully consulting with the proper authorities. Information about this type of fishing may be obtained at the Division of Trout, Channel Catfish, Tucanare, Oscar, and Bluegill Sunfish are for the catching. Regulations are provided by the Fish and Game Division. The streams teem with life here on Kauai -- come and get it!

Hunting . . .

Hunting is another challenging sport available on the Garden Island, Kauai. Put on your waterproof parkas and camouflage caps -- Kauai game is waiting to test your wits and nerve!

From the lush forests of the "wettest spot in the



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THE BICENTENNIAL
OF THE DISCOVERY OF THE HAWAIIAN ISLANDS
BY CAPTAIN JAMES COOK
1778 - 1978

Editor's Note:

This issue in our Hawaiian Bicentennial Series of publications is off-sequenced. Found in this issue is Part VII; Parts IV, V and VI are not yet ready for publication, but should appear in 1980. In order to resume

* Hawai'i place names which have been verified as being correct appear with an asterisk preceeding them the first time they appear in each issue.

** Hawaiian terms spelling in accordance with recommendations of the 'Ahahui 'Ōlelo Hawai'i spelling project of 1978.

*** Published.



a posture of confidence, our readers are reminded that our Bicentennial Series articles are numbered as follows:

*** Prehistory of Waimea	(I)
*** Cook's Discovery and Landing	(II)
*** Early Post-Cook Visitors	(III)
Vancouver	(IV)
The Russian Adventure at Waimea	(V)
The Missionaries	(VI)
The Great Māhele	(VII)
The Sugar and Agricultural Industry	(VIII)
Historical Waimea	(IX)

PART VII

The Great Māhele

Revolutionary Change in Land Ownership in Hawai'i

by

Frances Frazier

In *Waimea on the Island of *Kaua'i (Figure 1), as elsewhere throughout the Hawaiian Islands, land ownership by commoners and foreigners had its roots in a far-reaching land reform called the Great Māhele. Māhele, a Hawaiian word meaning portion or division, was originally used to refer to the division made between crown lands, government lands, and lands of the chiefs. From this division, the entire period of resolution of land ownership came to be generally, though incorrectly, known as the Great Māhele.

In ancient times, high chiefs had no fixed residences but moved about according to their desires and the abilities of the small communities

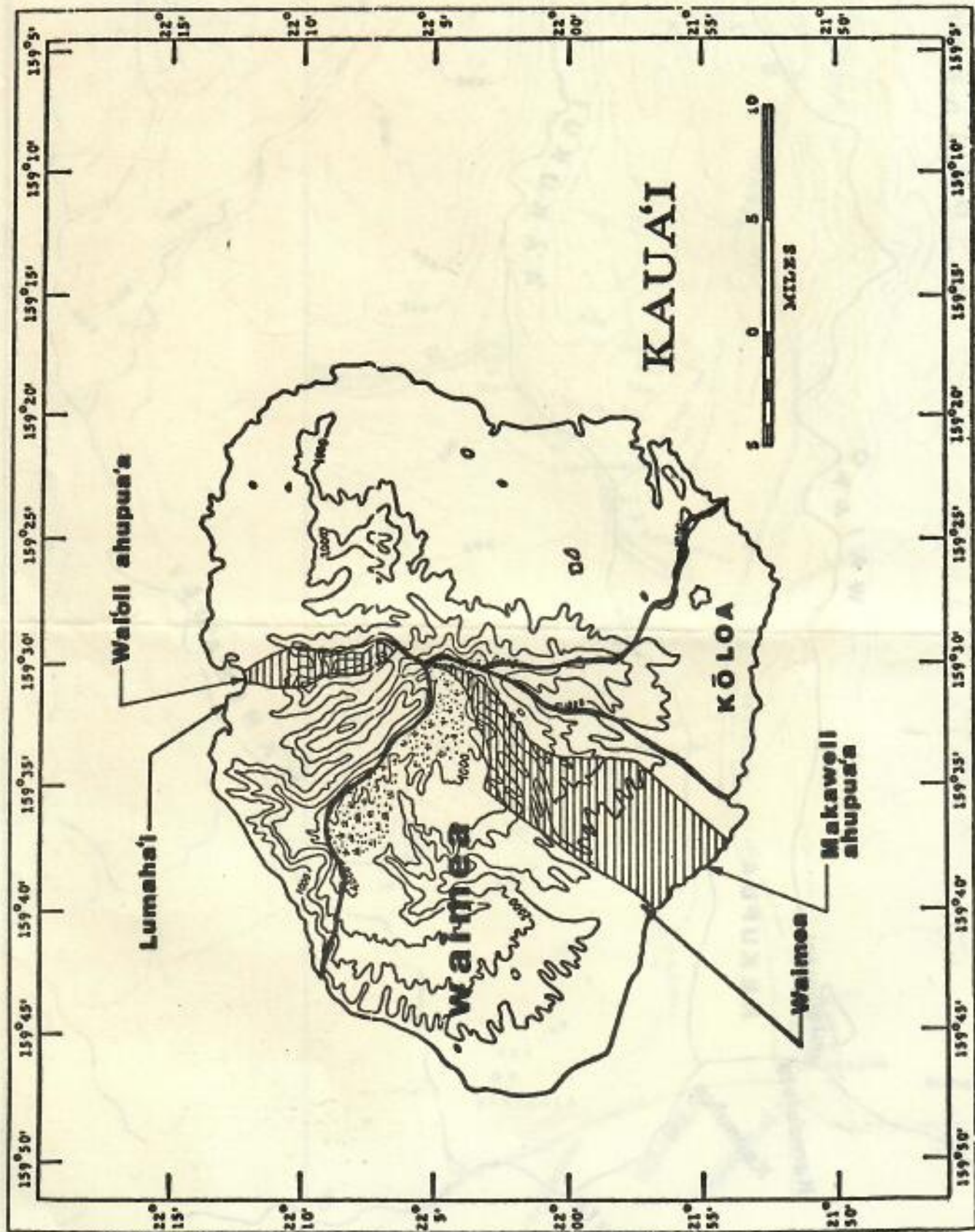
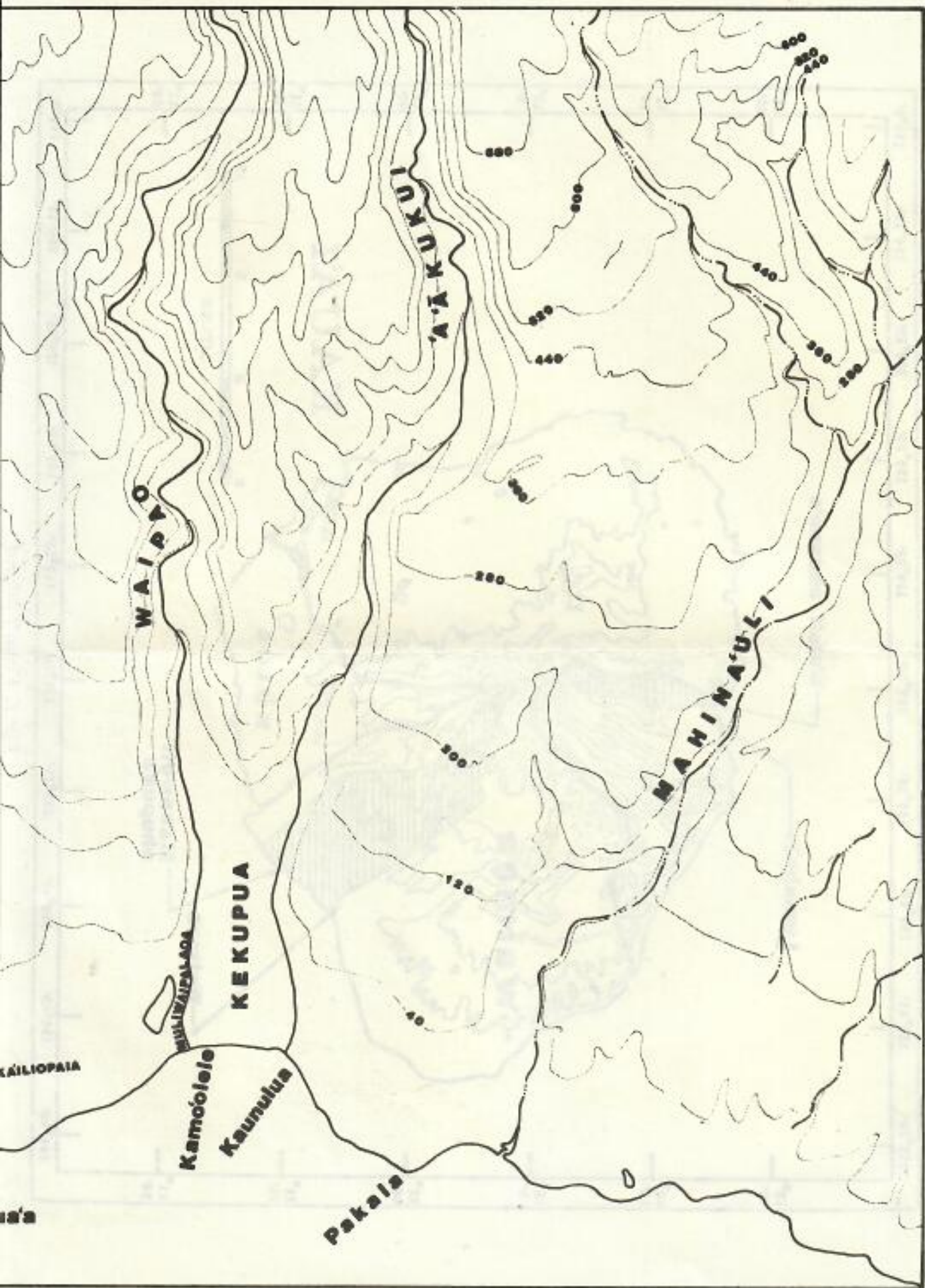


Fig 1. Kauai Island



the lands of Waimea and Makaweli

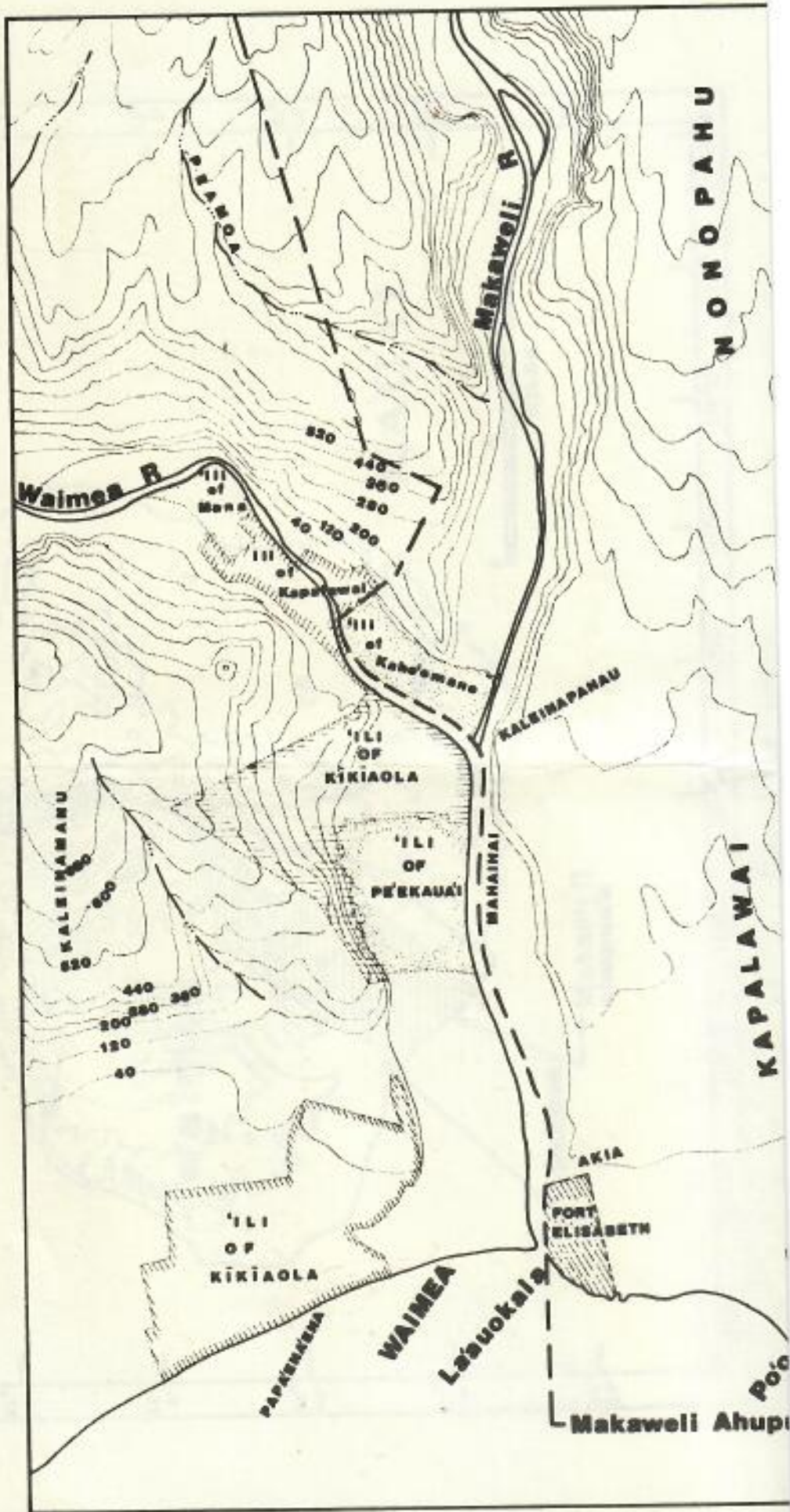


Fig 2. T

to support them and their large retinues. The common people remained on the land or went to war at the pleasure of their chiefs, but never could they consider themselves to be rightful owners of any piece of land. Up until the mid-1800s, when contact with foreigners brought the influence of European ideas to the Islands, all land was possessed exclusively by the paramount ruler who held it by right of descent, or by conquest, as in the case of Kamehameha I. Individuals did not have allodial, or freehold, right to the lands they occupied, as the following two examples demonstrate.

First is a letter written in the Hawaiian language to the Board of Commissioners to Quiet Land Titles by Noa Niolua, formerly a resident of Waimea, dated 11 January 1848 at *Wai'oli, Kaua'i (Claim No. 3900). He claimed land at *Lumaha'i (Figure 1), substantiating his claim thus:

. . . in the time before Mikuini (Mr. Samuel Whitney, a teacher who arrived in *Hawai'i in 1820 with the first company of missionaries and who established a mission at Waimea) came here to Kaua'i, I was living at Waimea with Kaumuali'i; we surfed together. He said to me, "Our land is at Lumaha'i - it is named Kama'ihi." From thence I have possessed this land without hindrance or denial . . .

The word our, underlined by the writer, reveals the ancient attitude. The Hawaiian phrase read "Aia ka 'āina o kāua ma Lumaha'i." Kaumuali'i did not say "your land"; he said "our land," using the dual, inclusive pronoun which refers only to the speaker and the person being addressed. In other words, it was Niolua's to occupy but not to own. This claim, by the way, is listed in the Index of Awards as not awarded.

A second example, showing capricious dispossession, is described in a letter by the chiefess Ahukai, also known as Ka'u'ukuali'i (Honolulu 1846) (see Appendix). Ahukai stated that Ka'ilinaoa, her mother and a close relative of Kaumuali'i, had received the ahupua'a (a land division usually extending from a mountain ridge to the sea) of *Makaweli, located

in the Waimea district (Figure 1), from Kaumuali'i. She claimed that she had inherited this land from her parents and had possessed it until 1846, when Governor Mataio Kekuanao'a had taken Makaweli and some other lands from her. At the hearing on land claims held before the Board of Commissioners to Quiet Land Titles, a witness named 'Ōpūnui stated that Kekuanao'a took the entire ahupua'a from Ahukai because she refused to give him the 'ili (a land division less than an ahupua'a in size) of *Kekupua (Figure 2), probably the choicest part of the ahupua'a (Honolulu n.d., Vol. II:232). Ahukai did not receive the ahupua'a. It was included in a partial list of lands agreed upon by the Māhele to belong to Victoria Kamamalu, daughter of Kekuanao'a (Honolulu 1929, Land Court Award [LCA] 7713, Royal Patent [RP] 4476).

Events preceeding the period in which these two letters were written are too complex to compress into this short account. However, they included mounting pressures from foreign communities to acquire land for agriculture, industry and business; the short episode of the arrival of Lord George Paulet on the frigate Carysfort in 1843 when he forced the cession of the Hawaiian Kingdom to England; and the arrival of Admiral Sir Richard Thomas who repudiated Paulet's actions and restored the Islands to an independent sovereignty.

After much discussion between Kauikeaouli, Kamehameha III, Dr. Gerrit P. Judd, Minister of the Interior, and the legislative council, an organic act was drawn up by Attorney General John Ricord which provided, among other things, for the formation of a "board for the investigation and final ascertainment or rejection of all claims of private individuals, whether natives or foreigners, to any landed property" acquired before the passage of the act. Five commissioners, including the Attorney General, were appointed by the King. The board was guided by the "Principles Adopted by the Board of Commissioners to Quiet Land Titles in Their Adjudication of Claims Presented to Them," a lengthy discussion of the history of land ownership in Hawai'i, including problems and their solutions.

On 14 February 1846, a notice of the formation of the board, originally intended to be in existence for only two years but not actually dissolved until 1855, appeared in the Polynesian, a weekly newspaper which had become the official organ of the government in 1844. Also included was a notice to "All claimants of lands in the Hawaiian Islands" to present their claims to the Board of Commissioners to Quiet Land Titles and receive awards for the lands received in the māhele, subject to the rights of the native tenants. Only the King was exempt from this procedure. Commutation of the government's interest in the lands claimed was generally satisfied by surrender to the government of lands not received in the māhele. A Royal Patent upon Confirmation of the Board of Commissioners to Quiet Land Titles was then issued to the claimant.

In 1849, the Privy Council adopted resolutions which empowered the land commission to provide fee simple titles, free of commutation, to native tenants of lands occupied and improved by them; however, it did not include house lots in *Honolulu, *Lāhainā and *Hilo. Such awarded land was referred to as a kuleana and could include a pā hale, or house lot; lo'i, or irrigated taro growing land; and kula, or unirrigated land, not necessarily all in the same place. Furthermore, government land on each island was set apart, to be sold in fee simple lots from one to fifty acres at a minimum of fifty cents per acre.

In addition to transferring land to claimants who applied to the land commissioners, other types of land transactions were made, such as sales of government land for the purpose of obtaining revenue. Kamehameha II and his successors sold, leased or mortgaged crown lands until the passage of an act on 3 January 1865 made the crown lands inalienable (Honolulu 1864:69; Honolulu 1925:2177-2179).

Waimea in the Mid-1800s

The banks of the Waimea River and the point of land where the Waimea and Makaweli Rivers meet were thickly settled during the mid-1800s.

In the 'ili of Pe'ekaua'i alone (Figure 2), extending along the west side of the Waimea River, more than fifty land commission awards are listed in a thick volume called the Indices of Awards made by the Board of Commissioners to Quiet Land Titles in the Hawaiian Islands (Honolulu 1929). Awards made along the western boundary of the ahupua'a of Makaweli adjoining Waimea, especially in the 'ilis of Kaho'omano, Hakioa and Kakalae (Figure 2), significantly contributed to the growth of Waimea.

Population was also affected by disease brought by foreign contacts. The spread of venereal disease has been widely recorded, and other diseases were periodically epidemic. In 1848, the Minister of the Interior sent a communique to Governor Paul Kanoa to the effect that the Privy Council had set aside December 6 as a day of fasting and prayer on *O'ahu because of the appearance of a new disease, measles; Governor Kanoa was directed to do the same on Kaua'i. A study of the Native Register which contains the letters of land claimants to the land commissioners, with an occasional check of the Native Testimony on these claims, reveals that a number of claimants died in the relatively short period between the time their claims were made and the testimony on these claims was heard.

It is difficult to determine how many of the claimants of land in Waimea had held their land through previous generations. A few stated that their lands had been received from Kaumuali'i. Many others stated that their lands had been received after the 1824 insurrection which took place after his death. Twenty or more land claims were made by soldiers who had been stationed at Fort Elizabeth, the Russian Fort, located on the east bank of the Waimea River. These claims were mainly in the 'ili of Kaho'omano (Figure 2) where land had been set aside for maintenance of the fort garrison. Pa'ele, the fort superintendent, wrote a long, aggrieved letter to the commissioners in regard to the use of the 'ili of Kaho'omano for the soldiers (Honolulu 1846, Claim No. 6558, Vol. 9:216).

Fort Elizabeth was also affected by the Paulet episode when the Kingdom of Hawai'i was briefly taken over by the English. Father

Arsenius Walsh, a Sacred Hearts priest who came to Hawai'i in 1836, recorded in his journal that on 4 March 1843, "Lt. Bacherville hoisted the English flag and demanded that all prisoners should be released" (Walsh n.d.). A letter from Samuel Whitney to Mr. Levi Chamberlain, dated 8 March 1843 at Waimea, states in part, "...we have had a message from the King, Leleohoku [sic] to pull down the Sandwich Island flag, and a young Englishman, a midshipman of the Frigate, to hoist the English Union Jack on the walls of the fort at this place . . ." (Whitney 1843a). Another letter written by Whitney to Mr. Edwin O. Hall, dated 28 June 1843 at Waimea, stated that Lord George Paulet had been at Waimea and had left for *Koloa. He said that he had not seen Paulet or his officers because he was indignant that the English had assembled the local magistrates and told them they must no longer punish unmarried folk for breaking the king's laws on the subject of licentiousness. He said he thought that his lordship had gone away huhū (angry) because some of the English subjects had reported falsely that he had driven the women to the mountains so that they would have no contact with Paulet and his men (Whitney 1843b).

Among the claims approved by the land commissioners for land in Waimea were those of the missionaries. Mercy P. Whitney, a missionary and wife of a missionary, revealed a royal patent (RP 1938) for land which she and her husband had occupied at Waimea. This patent was originally a portion of an earlier patent (RP 1600) granted to Samuel N. Castle and Amos S. Cooke, agents for the American Board of Commissioners for Foreign Missions, one part of which was for lands at Waimea, Wai'oli and Kōloa (Figure 1) on Kaua'i. In his journal, Horton Owen Knapp (Knapp n.d.) noted that he and Mrs. Knapp had visited the Whitneys at Waimea in December 1842. He wrote that Mr. Whitney had a garden which supplied them with vegetables, and a vineyard--enclosed within an adobe wall with a locked door--which had an abundance of grapes. Most of the Whitneys' land, however, was used as taro patches and occupied by native families who were free from paying taxes and who rendered services to Mr. Whitney in return for the use of the land.

Another missionary, George P. Rowell, received land at Waimea (RP 1942) in a patent which was also originally a portion of the patent granted to the American Board of Commissioners for Foreign Missions. Letters at the State Archives in Honolulu testify to Mr. Rowell's solicitude for the Hawaiian claimants of land, in order that their claims might be approved by the land commission. By contrast, the Native Testimony shows that in several cases Governor Kanoa destroyed claims that were on dirty paper or not properly written. Paper was not easy to come by in those days, and several claimants stated that they would have written longer letters if they had had more paper.

A brief look at some of the other land commission awards granted in the Waimea area helps to establish a clearer picture of the scope of the influence of the Great Māhele. Debora Kapule, who had been one of Kaumuali'i's wives, received a royal patent, Land Commission Award 3111, RP 5489 (Honolulu 1929), for 13 acres and 3 rods (13.018 acres, [see Table I]), of land in Kīkīaola (Figure 2). D. 'Oleloa, LCA 2960, RP 7605 (Ibid.), received 4 acres, 1 rood, 8 rods (4.3 acre) also in Kīkīaola. 'Oleloa was the husband of Ahukai, the chiefess who claimed the ahupua'a of Makaweli (Figure 1), which had been summarily taken away from her by Kekuanao'a. W.B. Aka, LCA 6514, no RP issued (Ibid.), received 1 acre, 14 rods (1.0875 acres) of land in Makaweli.

B. Naumu, LCA 5362, RP 8137 (Ibid.), received 21 acres, 1 rood and 33 rods (21.45 acre) in Waimea. Isaac Neck, LCA 6112, RP 8242 (Ibid.), who received 2 rods, 21 rods (.63 acre) also in Waimea, stated in his letter that he had received a mo'o (small strip of land), a house lot and another piece when working under Kaikio'ewa, a former governor of Kaua'i. Elia Līhau, LCA 2290, no RP issued (Ibid.), who received 2 acres, 1 rood, 10 rods (2.3125 acre) in Waimea, stated that he was given Waiawa when he was a fisherman for the chief Moses Kekuaiwa. Hepa, LCA 6522, no RP issued (Ibid.), received 2 acres, 3 rods, 38 rods (2.98 acre) at Kapalawai (Figure 2) in Waimea. Emilia Keawemahi, the widow of Kaikio'ewa, also claimed land in Waimea; the land was awarded in the name of Kapuni'ai, whom she later married and who received one royal patent (RP 8070) on several land commission awards.

Simona Kuapapahu and Kahalaopuna, LCA 9040, no RP issued (Ibid.), received 1.5 acres, and Kuapapahu also claimed Manawai (Figure 2), a river mouth in the ahupua'a of Makaweli. He described it as an 'o'opu (general name for fish as included in the families Eleotridae and Gebiidae) enclosure in the muliwai (river mouth) of Makaweli, bounded by Kaho'omano, Kakalae and a pali (cliff) named Leinapokau. Koula, LCA 3588, RP 6634 (Ibid.), received 2 acres, 2 roods, 7 rods (2.54 acres) in Pe'ekaua'i, which he claimed as the heir of Kalaupaka, his punalua (spouse sharing a spouse), who received it from Kaumuali'i. Melieke, or Merieke, LCA 6674, RP 5271 (Ibid.), who received 1 acre, 1 rood, 37 rods (1.48 acre), asked for three mo'os in the 'ili of Pe'ekaua'i and also described an 'o'opu trap in the river which she considered to be hers.

An interesting but involved research project would be to trace present-day ownership of the parcels of kuleana land in the Waimea area in order to determine how many, if any, of the present owners are descendants of the original land commission award recipients. In cases where a kuleana claim has been kept intact and descended through the family of the original awardee, the title to it is good to this day.

However, title to land in Waimea and elsewhere throughout the Hawaiian Islands has been lost to many descendants for many reasons. Some award recipients did not realize the future value of their land, while others did not understand the necessity of paying taxes, or perhaps died intestate. Many land transactions also took place because the owner regarded the land merely as something of value for his own use without regard for subsequent generations.

In any event, the land reform known by general usage as the Great Māhele laid the foundation for a new era in the history of the Hawaiian Islands in general, and particularly of our local town of Waimea on the Island of Kaua'i, where Captain James Cook first landed in January 1778, providing a contact which eventually led to the generation of new concepts of land ownership in Hawai'i.

TABLE I

Units of Land Measurement

1 rod = unit of length = $5\frac{1}{2}$ yards or $16\frac{1}{2}$ feet

1 rood = unit of area = 40 square rods = $\frac{1}{4}$ acre

1 acre = 4 square rood = 160 square rod = 43,560 square feet = 3,494.86 square meters

1 square rood = $\frac{1}{4}$ acre = 40 square rod = 10,890.0 square feet = 873.71 meters

1 square rod = $\frac{1}{160}$ acre = 272.25 square feet = 21.84 square meters

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APPENDIX

Below is an English translation of the letter written in 1847 by the chiefess Ahukai to the Board of Land Commissioners (Honolulu 1846, Claim 2960, Vol. 9:H). The same letter was again submitted exactly one year later. Following the translation is the original letter as it was written in Hawaiian, which in turn is followed by the same letter using spelling which is in accordance with the recommendations of the 'Ahahui 'Ōlelo Hawai'i spelling project of 1978.

ENGLISH TRANSLATION

To the President of the Land Commissioners and the other Four Commissioners: Greetings to you: In accordance with the law enacted concerning claims for land, I hereby make my claim from ancient times, from my ancestors. This claim which I make for you to administer is Makaweli, on the Island of Kaua'i.

The basis of my claim is as follows: When Ka'eo ruled on Kaua'i, he gave Makaweli to his sister, Manuha'aipo. This is finished.

When Kaumuali'i ruled Kaua'i, he gave Makaweli to his sister, Ka'ilinaoa, from Kawiliwili to the boundary adjoining Waimea; when Kaumuali'i died, Kalaimoku sent Kahalai'a to govern Kaua'i. Kaua'i rebelled against Kahalai'a and Kalaimoku, and when the war on Kaua'i was over, Kalaimoku gave Makaweli to Kahalai'a and Kahalai'a gave me Makaweli, as it had been occupied by my parents; when Kahalai'a died intestate, Kalaimoku and Ka'ahumanu made Kina'u the heir, and Kina'u gave me Makaweli, as it had been occupied by my parents; when Kina'u died, Kekauluohi returned me to Kaua'i, and she gave me Makaweli. No one has disputed this until the year 1846, when Kekuanaoa took Makaweli and some of my other lands.

Here is another claim of mine: Pu'uwahie, and 'Ili of land in Waimea on Kaua'i, which was given me by Kaumuali'i and has been held in peace since then.

Knowing of the laws concerning the ones with rights, therefore I enter my true claims, from my parents, for you to administer. When the day comes to work on these, then direct me and I will appear with the proper witnesses.

AHUKAI

Waioli, Kauai

December 14, 1847

HAWAIIAN TRANSLATION

I ka Berisidena o na Luna Hoona a me na Luna e ae Eha. Aloha oukou. E like me ke kanawai i kau ia no na mea kuleana aina, pela hoi au e haawi aku nei i ko'u kuleana kahiko mai ko'u mau kupuna mai. O Keia kuleana a'u e haawi aku nei, a na oukou e hooponopono mai, o Makaweli aia i ka Mokupuni o Kauai.

Penei ke kumu o ko'u kuleana ana. I ka wa i noho Aupuni ai o Kaeo ia Kauai, haawi iho la oia ia Makaweli i kona kaikuahine ia Manuhaaipo. Pau ia.

I ka wa i noho Aupuni ia o Kaumualii ia Kauai, haawi o Kaumualii ia Makaweli i kona kaikuahine ia Kailinaoa, mai ka wiliwili a hiki i ka palena e pili ana me Waimea, a make o Kaumualii hoihoi o Kalaimoku ia Kahalaia e noho Aupuni ia Kauai. Kimo po o Kauai ia Kahalaia a me Kalaimoku a pau ke kua ana ma Kauai haawi o Kalaimoku ia Makaweli no Kahalaia a haawi mai la o Kahalaia ia Makaweli no'u, e like me ka noho ana o ko'u mau makua, a make o Kahalaia me ke kauoha ole, haawi o Kalaimoku a me Kaahumanu, o Kinau ka hoolina, a haawi mai la no o Kinau ia Makaweli no'u e like me ka noho ana mai a ko'u poe makua, a make o Kinau, hoihoi o Kekauluohi ia'u i Kauai, a nana mai i ke 'Ili, iau no o Makaweli. Aole mea nana i keakea mai. A hiki i ka makahiki 1846 aku nei, lawe o Kekuaaoa ia Makaweli a me kekahi mau aina e ae e pili ana ia'u.

Eia kekahi kuleana o'u, o Puuwahie, he Ili aina aia i loko o Waimea i Kauai, mai k Kaumualii mai a haawi mai ia'u, mai laila a hiki i keia manawa a eia no ia'u e waiho nei me ka malu.

A no ka hoomaopopo ana mai o ke kanawai no na mea kuleana, nolaila ke hookomo aku nei au i ko'u mau kuleana oiaio mai na makua mai, na oukou ia e hooponopono mai. A hiki i ka la hana'i, alaila kauoha mai oukou ia'u a hele aku no au me na hoike pono.

Na Ahukai

Waioli, Kauai

Dekemaba 14, 1847

'AHAHUI 'ŌLELO HAWAI'I SPELLING

I ka Pelekikena o nā Luna Ho'onā a me nā Luna 'ē a'e 'ehā. Aloha 'oukou. E like me ke kānāwai i kau 'ia no nā mea kuleana 'āina; pēlā ho'i au e hā'awi aku nei i ko'u kuleana kahiko mai ko'u mau kūpuna mai. 'O kēia kuleana a'u e hā'awi aku nei, a na 'oukou e ho'oponopono mai, 'o Makaweli aia i ka mokupuni 'o Kaua'i.

Penei ke kumu o ko'u kuleana 'ana. I ka wā i noho aupuni ai 'o Ka'eo iā Kaua'i, hā'awi ihola 'o ia iā Makaweli i kona kaikuahine, iā Manuha'aipo. Pau ia.

I ka wā i noho aupuni ai 'o Kaumuali'i iā Kaua'i, hā'awi 'o Kaumuali'i iā Makaweli i kona kaikuahine, iā Kailianoa, mai Kawiliwili a hiki i ka palena e pili ana me Waimea; a make 'o Kaumuali'i, ho'iho'i 'o Kalaimoku iā Kahalai'a e noho aupuni iā Kaua'i. Kīmopō 'o Kaua'i iā Kahalai'a a me Kalaimoku, a pau ke kua 'ana ma Kaua'i, hā'awi 'o Kalaimoku iā Makaweli no Kahalai'a, a hā'awi maila 'o Kahalai'a iā Makaweli no'u, e like me ka noho 'ana o ko'u mau mākuā; a make 'o Kahalai'a me ke kauoha 'ole, hā'awi 'o Kalaimoku a me Ka'ahumanu, 'o Kina'u ka ho'oilina, a hā'awi maila nō 'o Kina'u iā Makaweli no'u e like me ka noho 'ana mai a ko'u po'e mākuā; a make 'o Kina'u, ho'iho'i 'o Kekauluohi ia'u i Kaua'i, a nāna mai i ke ali'i, ia'u nō 'o Makaweli. 'A'ole mea nāna i ke'ake'a mai a hiki i ka makahiki 1846 aku nei, lawe 'o Kekuanāoa iā Makaweli a me kekahi mau 'āina 'ē a'e e pili ana ia'u.

Eia kekahi kuleana o'u, 'o Pu'uwahie, he 'ili 'āina aia i loko o Waimea i Kaua'i, maiā Kaumuali'i mai a hā'awi mai ia'u, mai laila a hiki i kēia manawa, a eia nō ia'u e waiho nei me ka malu.

A no ka ho'omaopopo 'ana mai o ke kānāwai no nā mea kuleana, no laila, ke ho'okomo aku nei au i ko'u mau kuleana 'oia'i'o mai nā mākuā mai, na 'oukou ia e ho'oponopono mai. A hiki i ka lā hana ai, a laila, kauoha mai 'oukou ia'u a hele aku nō au me nā hō'ike pono.

Na Ahukai

Wai'oli, Kaua'i

Kēkēmapa 14, 1847

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Kauai—it more than lives up to its name

By JAN TenBRUGGENCATE
Advertiser Kauai Bureau

LIHUE — When you think of Kauai, it's not normally entertainment, plush tourist facilities, or shopping you think of. Rather, it's the spectacular beauty of the island.

As the oldest of the major islands, Kauai has had longer to preen herself than have the other islands.

For this reason, there are sights like the Waimea Canyon, a monument to the artistry of erosion.

And the tall waterfalls etching white lines against the deep green

the neighbor islands

cliffs behind Hanalei. And the deep, wide, verdant hanging valleys of the Na Pali coast.

UNTIL RECENTLY, a tourist had little chance to get to the parts of the Garden Island that best show off its charms.

For many years only a single helicopter company carried tourists over Kauai, and those wishing to get to the back country were pretty much on their own.

Snorkel Kauai takes groups of up to 12 persons on personalized trips to a secluded beach for shelling, snorkeling and sunning.

Other firms will take the accomplished underwater person on diving tours by boat.

BACK ON LAND, the Tropical Rent-A-Mule people who operate mule rides into Kalaupapa on Molokai have proposed a similar mule ride into the Waimea Canyon, which should be a breathtaking experience. No date for that project has been set publicly, but is expected to be started soon.

For those who prefer to see what man has been able to do with nature's creations, there are a number of excellent gardens available for visits.

Olu Pua Gardens, a 12-acre former private estate outside Kalaheo, exhibits a variety of tropical foliage.

Not far away is the Pacific Tropical Botanical Garden, a research facility that is opened one day a week for limited tours.

In Poipu, Moir's Gardens contain one of the best selections of cacti and succulents to be found anywhere.

That's changing.

The helicopters are still there, but now there are three companies taking visitors from chopper pads in several areas.

Kenai Helicopters, Jack Harter Helicopters and Newcomer Papillon Helicopters all provide several basic tours.

They flit into the Waialeale Crater, the heart of the island, at the base of the mountain that is the wettest spot in the world.

They tour the Na Pali coast and can drop a tourist on a beach for the day, or longer. They soar through the Waimea Canyon. They circle the island.

FOR THE VISITOR who wants to get closer to the greenery, Trail Blazer Kauai is a new sight-seeing service that takes a visitor by four-wheel-drive vehicle into the brush and through the native forests.

To see Kauai from the sea, there are several charter fishing boats and a proposed service that will take people in an inflatable boat along the Na Pali coast from Hanalei Bay.

The visitor who likes the sea, but would rather be in it than on it, will find several firms on the island renting underwater diving gear and some diving tours.

The Manehune Garden in Nawiliwili combines native plants with a lesson in Hawaiian culture.

And in Waialua, Kauai's Paradise Pacifica exhibits plants of Polynesia with the dances of the people of the Pacific.

THE VISITOR to the island can pick from four major tourist accommodation areas, each with its own character.

Poipu is the sun-lover's haven. There is little rain and the coastal waters are normally calm.

The Lihue area houses the civic center and many non-tourist cultural activities take place at the county's Convention Hall here, with sports centered at the stadium complex on the outskirts of town.

Kapaa-Wailua is the center of most tourist activity, with shopping areas, parks, golfing and the Wailua River all generally within walking distance.

On the north shore is Princeville, away from the island's already-limited bustle, but with full-service tourist facilities and access to fine beaches, golf, tennis and other activities.

FOR THE POTENTIAL visitor, there are more ways to get to the Garden Island today than in years past, when Aloha and Hawaiian airlines provided virtually the only link.

Those carriers still provide full-service schedules to the island, but they have been joined by several other carriers.

OK (Oahu-Kauai) Air runs smaller planes at a lower rate, but less frequently, to Lihue Airport.

Island Pacific Air this month is to begin regular service to the renovated Princeville strip on the north shore.

And SeaFlite operates each afternoon from Oahu to Kauai and back.

Tourism on Kauai is clearly growing. There are more ways to get here, there are more places to stay, and there are more things to do.

And the Island still hasn't lost its charm.



Waimera Canyon: A monument to the artistry of erosion.



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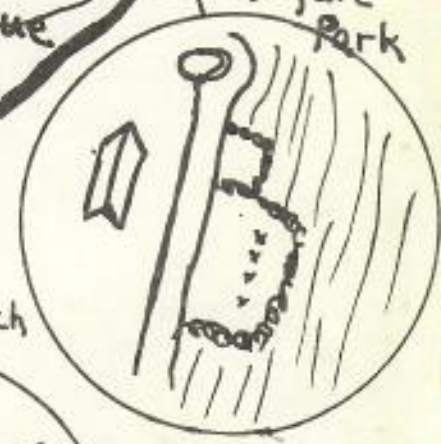
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KILAUEA POINT

HISTORY

Separated from the continental land masses by vast stretches of ocean, island forms of animal life evolved under conditions favorable for natural selection and specialization. The now extinct-rails of Hawaii, for example, became so specialized that they lost their powers of flight.

When Captain James Cook first visited Hawaii in 1778, 70 kinds of birds were found nowhere else in the world. Today 25 are extinct and at least 25 are threatened. The causes vary.

Birds introduced from other lands during the past 200 years brought diseases to which native birds had no resistance. Mosquitoes, also introduced by man, transmitted diseases from bird to bird. Introduced animals like the mongoose, cat, and dog became effective predators on ground-nesting Hawaiian birds. Competition for food and space by man has been intense and it continues to increase.

People also hunted birds for food, feathers, and sport. Vital habitat was destroyed through overgrazing by introduced livestock and conversion of land for agriculture, industry, and urbanization.

The Kilauea Point refuge, originally a U.S. Coast Guard facility, is administered by the Fish and Wildlife Service of the U.S. Department of the Interior. Two additional wildlife refuges are located on the island of Kauai: Huleia National Wildlife Refuge and the Hanalei National Wildlife Refuge.

PURPOSE

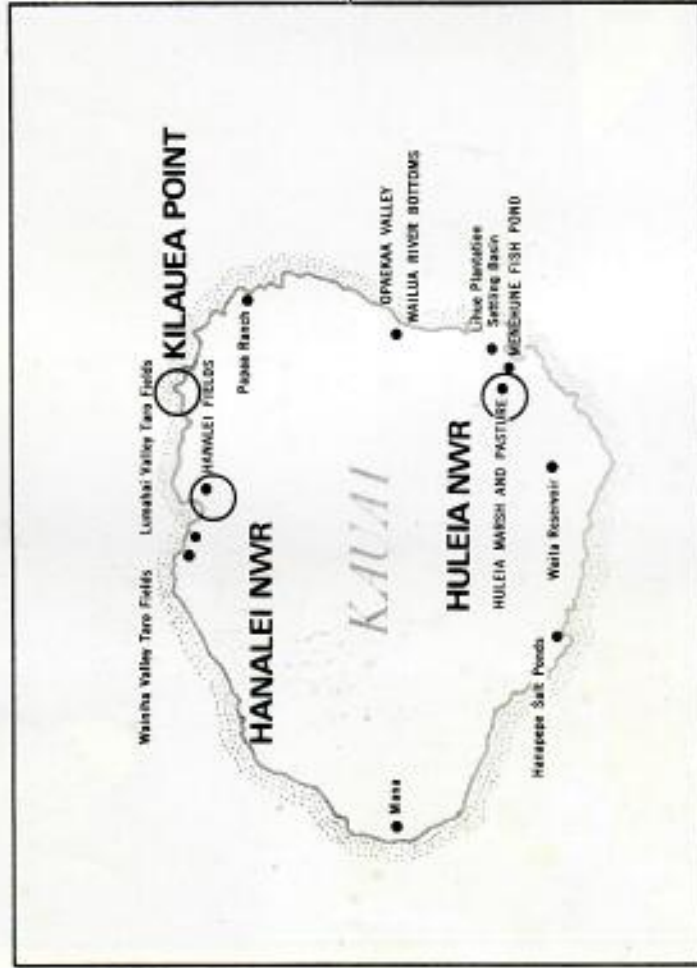
A primary purpose of the Kilauea refuge is to provide habitat for migratory seabirds. Emphasis is placed on 'ua'u kani, the wedge-tailed shearwater; the Laysan albatross; *koa'e ula*, the red-tailed tropicbird; *koa'e kea*, the white-tailed tropicbird; and 'a, the red-footed and brown boobies.

The refuge is the administrative site for the Kauai refuges and provides a visitor contact point to meet supportive public use objectives of the Hawaiian Islands Wildlife Refuges.

DESCRIPTION

Kilauea Point consists of 31 acres and is situated on the rugged northeast coastline of the island of Kauai. The lighthouse on this former Coast Guard installation is on the National Register of Historic Places. The structure was built in 1913 and it contains an unusual lens for that era.

The refuge is situated on Kilauea Point, five miles east of Hanalei Town, and 2 miles north of the plantation community of Kilauea. The principal highway to the refuge is by State Highway No. 56, the Prince Kuhio Highway. The refuge is about two miles north off the main highway via a narrow country road.



DEPARTMENT OF THE INTERIOR U.S. FISH AND WILDLIFE SERVICE

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

WILDLIFE

The refuge provides nesting and loafing areas for a variety of seabirds, notably wedge-tailed shearwater and red-footed booby. The seabird colony at Kilauea Point is the most successful colony remaining on the main inhabited islands of Hawaii. All of the seabirds are pelagic feeders; that is, birds that feed in the open seas.

The seabirds are able flyers, graceful and effort less in flight. The commonly seen wedge-tailed shearwaters often soar and then fly low over the ocean waters, gathering food from the surface. At the refuge on the southeastern shoreline at the head of the cove, a breeding colony of red-footed boobies can be seen. The booby nests are usually in bushes and trees.

The following table provides wildlife-related information for the Kilauea refuge. These wildlife-related data provide a means of understanding and relating these resources to the management and public use of the Kilauea site.

PARTIAL BIRD LIST AND STATUS

Wedge-tailed Shearwater	<i>Puffinus pacificus chlororhynchus</i>	'ua'u kani	Common spring to fall
Red-tailed Tropicbird	<i>Phaethon rubricauda</i>	koa'e 'ula	Common may be seen
White-tailed Tropicbird	<i>Phaethon lepturus</i>	koa'e kea	Common spring to fall
Red-footed Booby	<i>Sula sula rubripes</i>	'a	Common resident year round
Brown Booby	<i>Sula leucogaster plotus</i>	'a	Uncommon but may be seen
Great Frigatebird	<i>Fregata minor palmerstoni</i>	iwa	Common resident year round



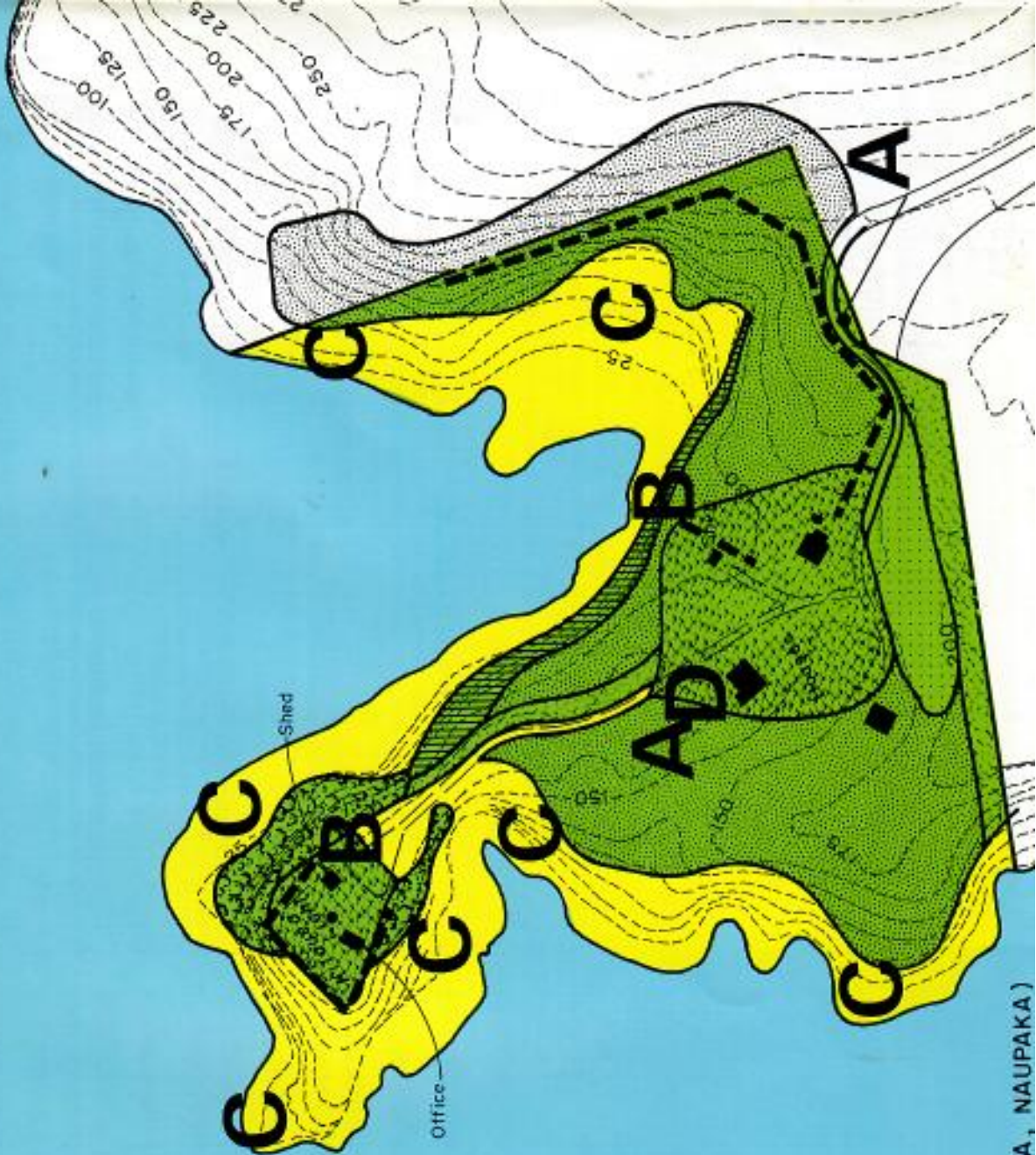
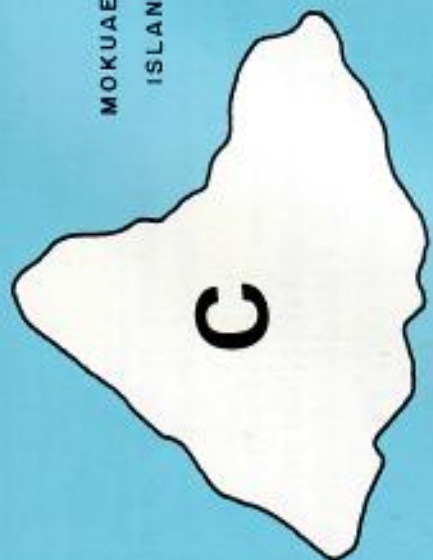
Nesting red-footed boobies.



Wedge-tailed shearwater.

P A C I F I C

MOKUAEEAE ISLAND



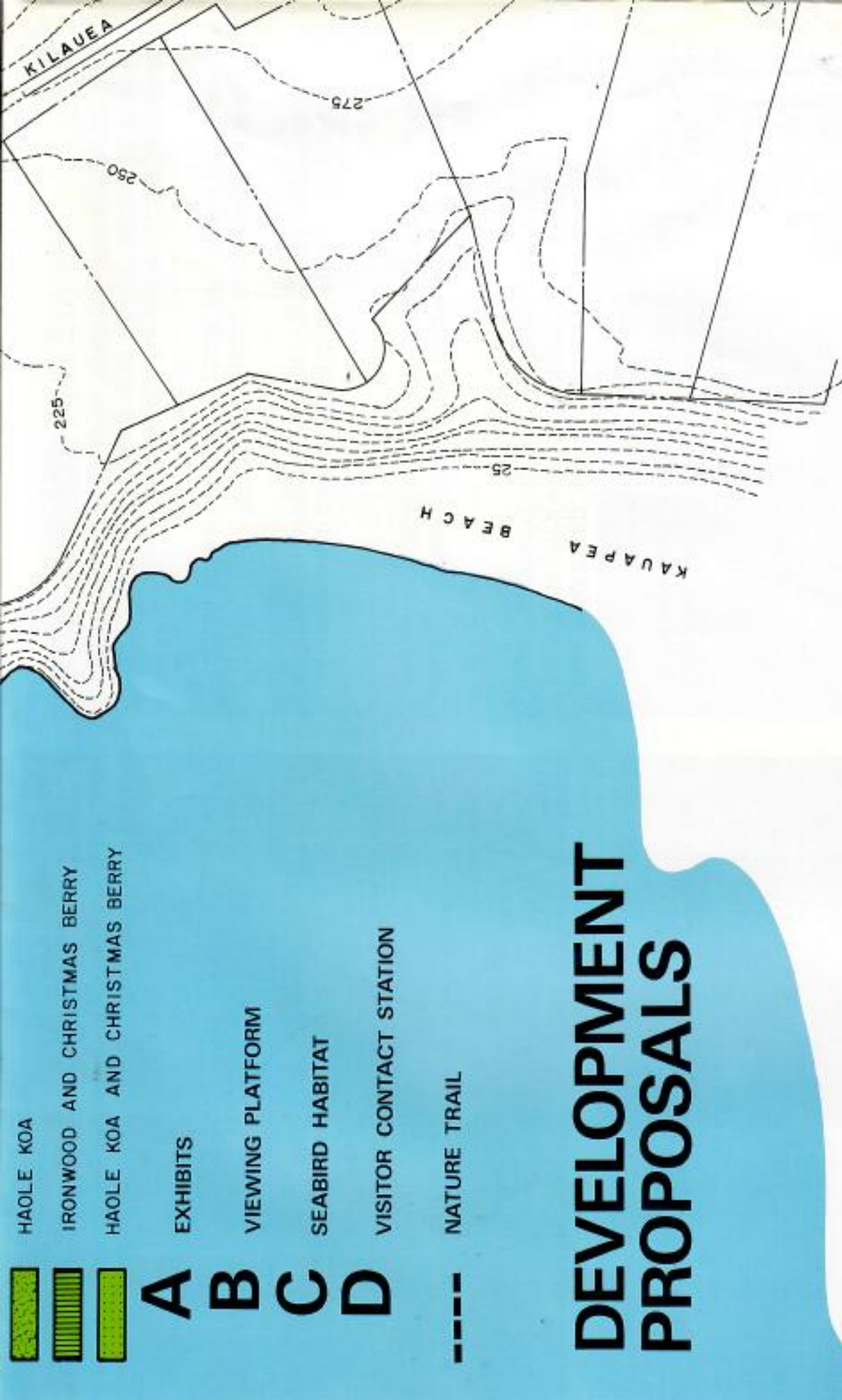
VEGETATION

IRONWOOD & PANDANUS

BUFFALO GRASS

SHRUBS (LANTANA, EUPHORBIA, NAUPAKA)





HAOLE KOA

IRONWOOD AND CHRISTMAS BERRY

HAOLE KOA AND CHRISTMAS BERRY

EXHIBITS

VIEWING PLATFORM

SEABIRD HABITAT

VISITOR CONTACT STATION

NATURE TRAIL

A B C D

DEVELOPMENT PROPOSALS

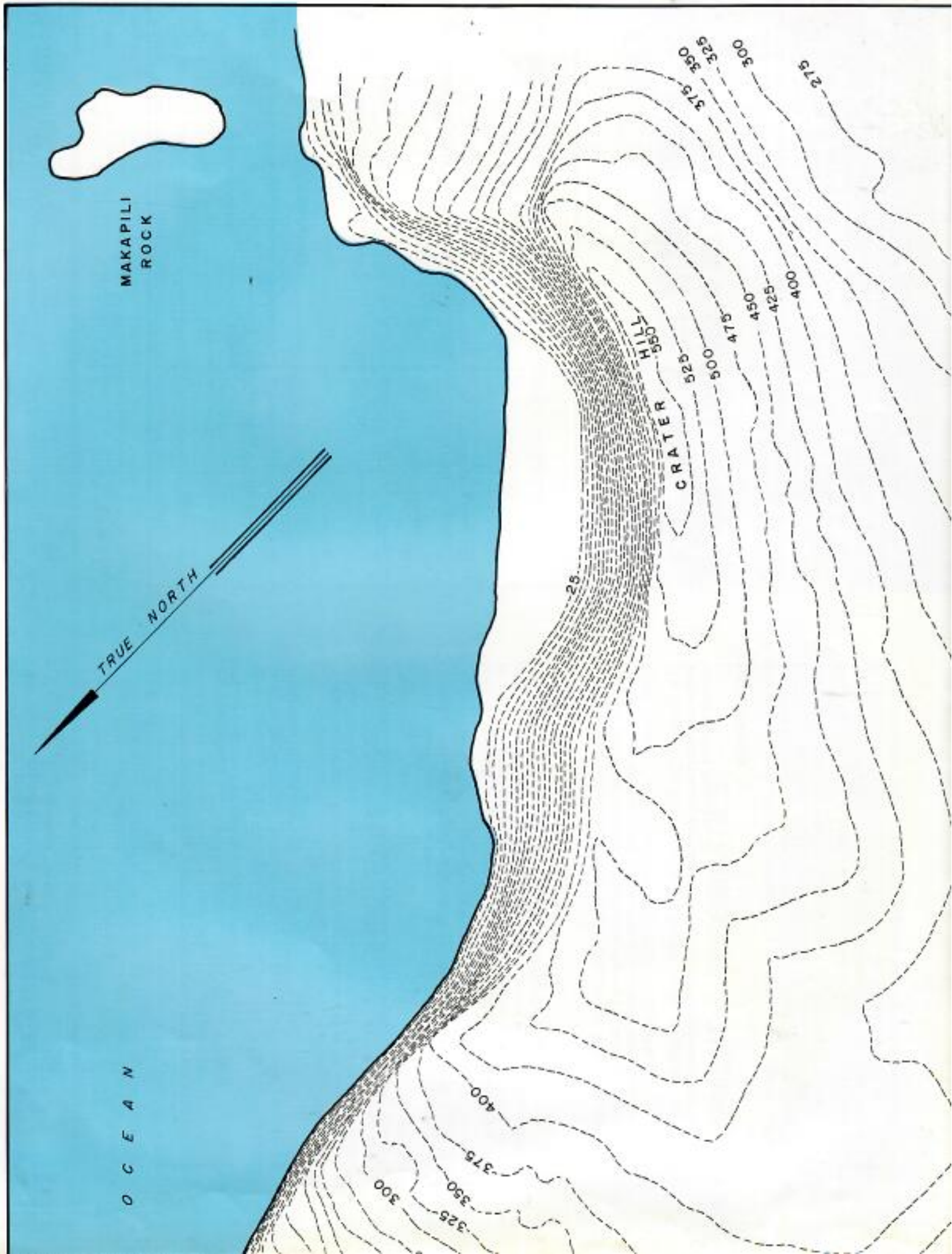
PREPARED BY:

MKGK / YAMAMOTO, INC.

HONOLULU, HAWAII

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

K
KILAUEA



MAKAPILI
ROCK

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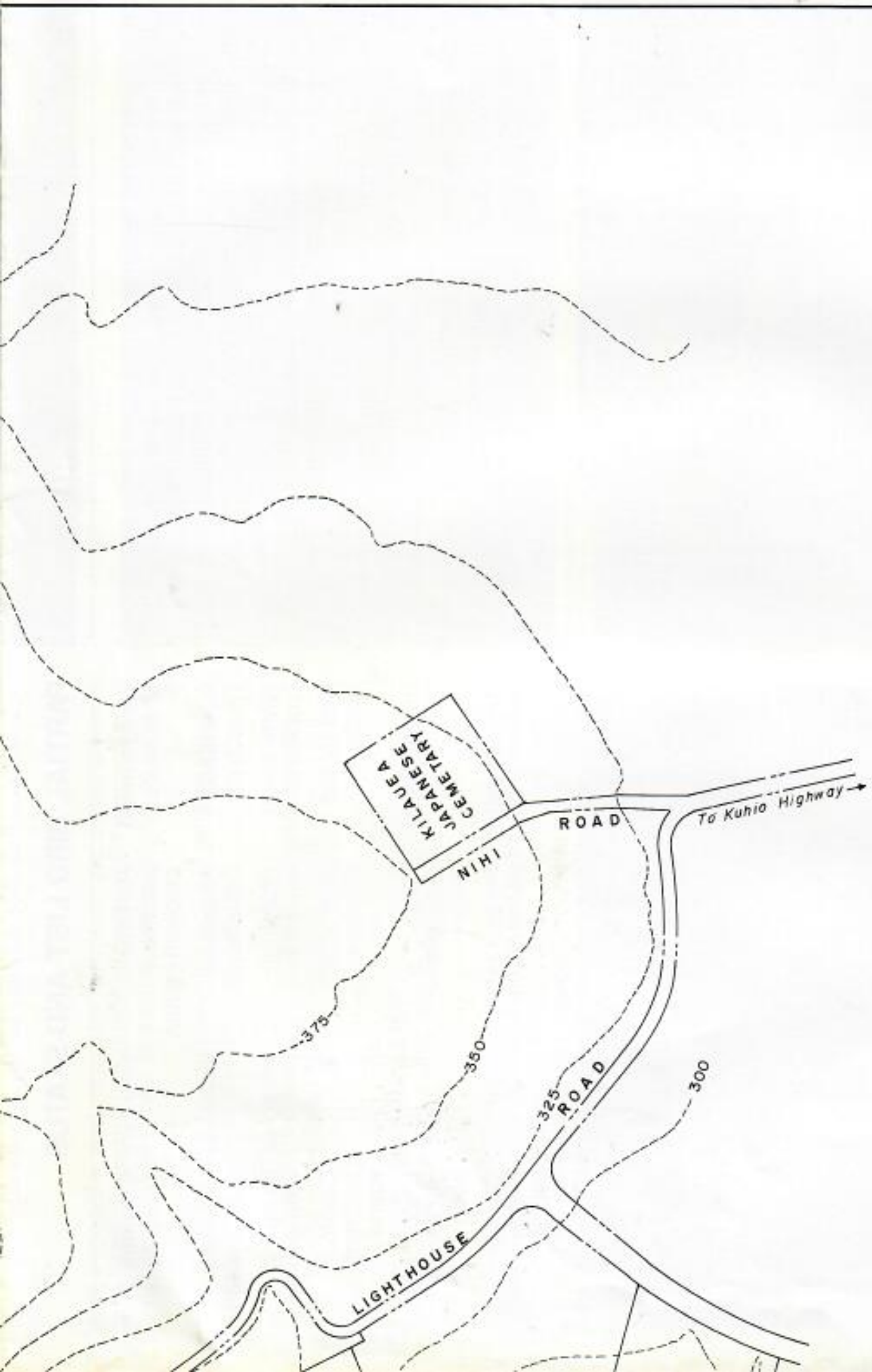
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SHEET

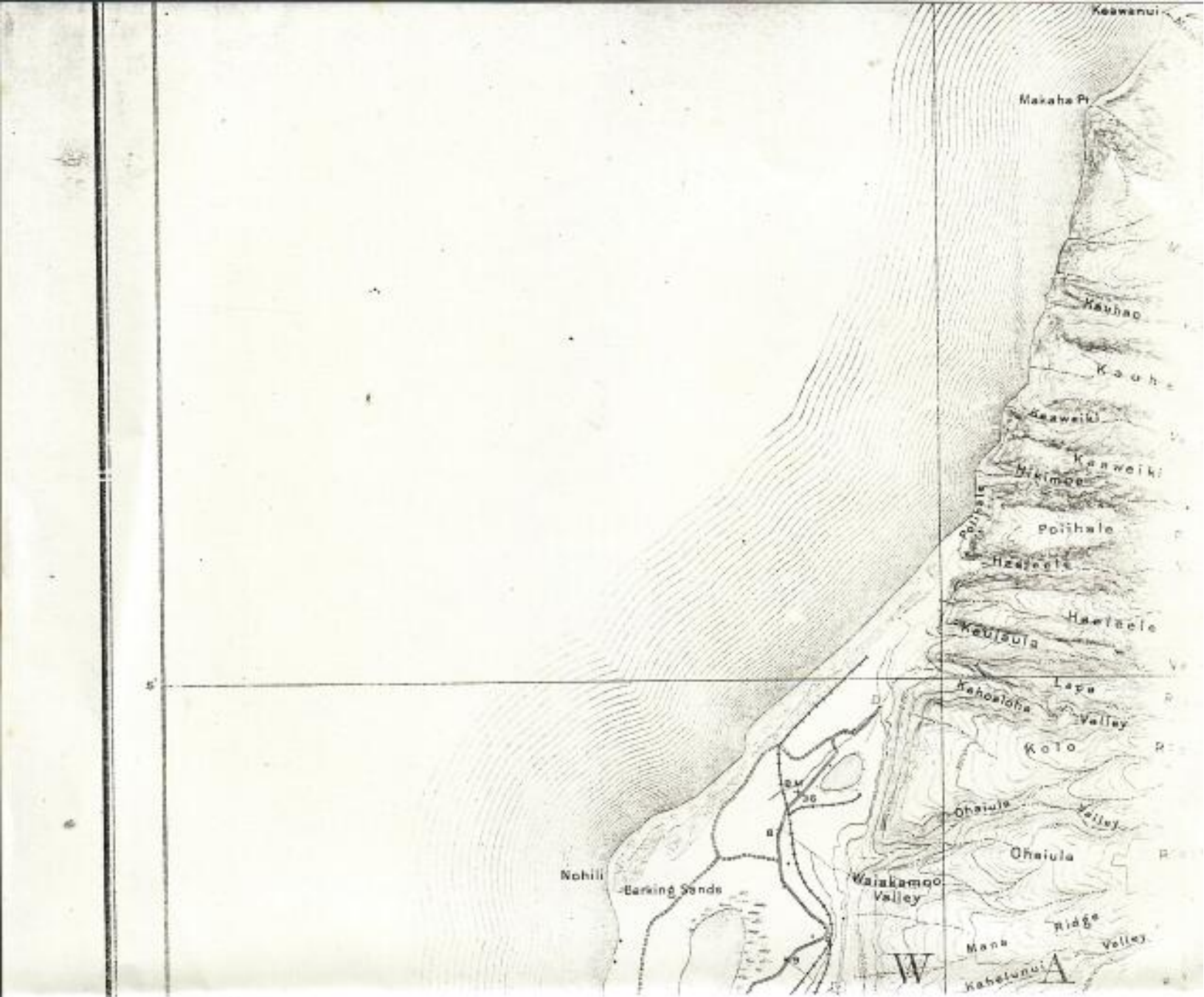
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SCALE:

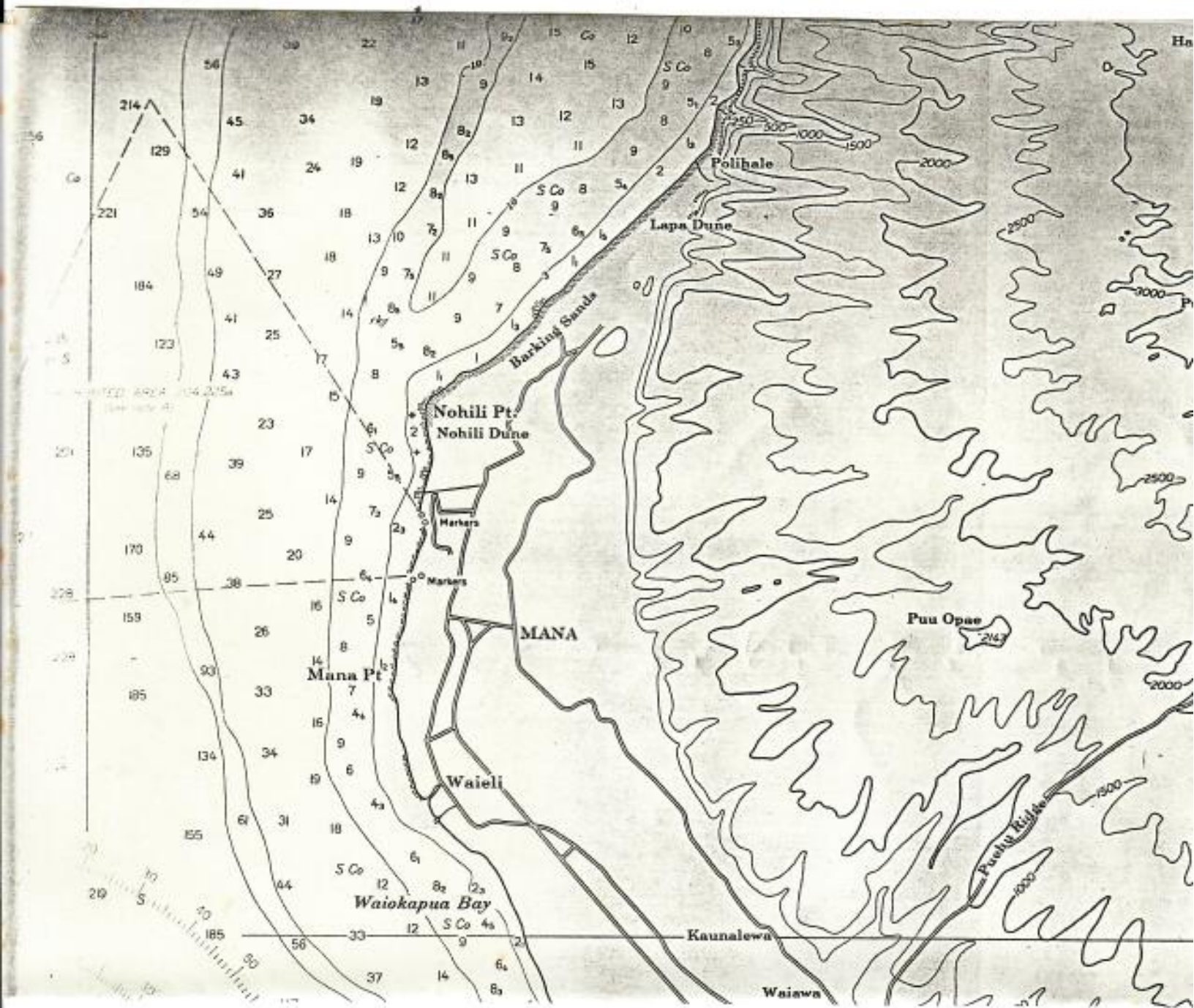


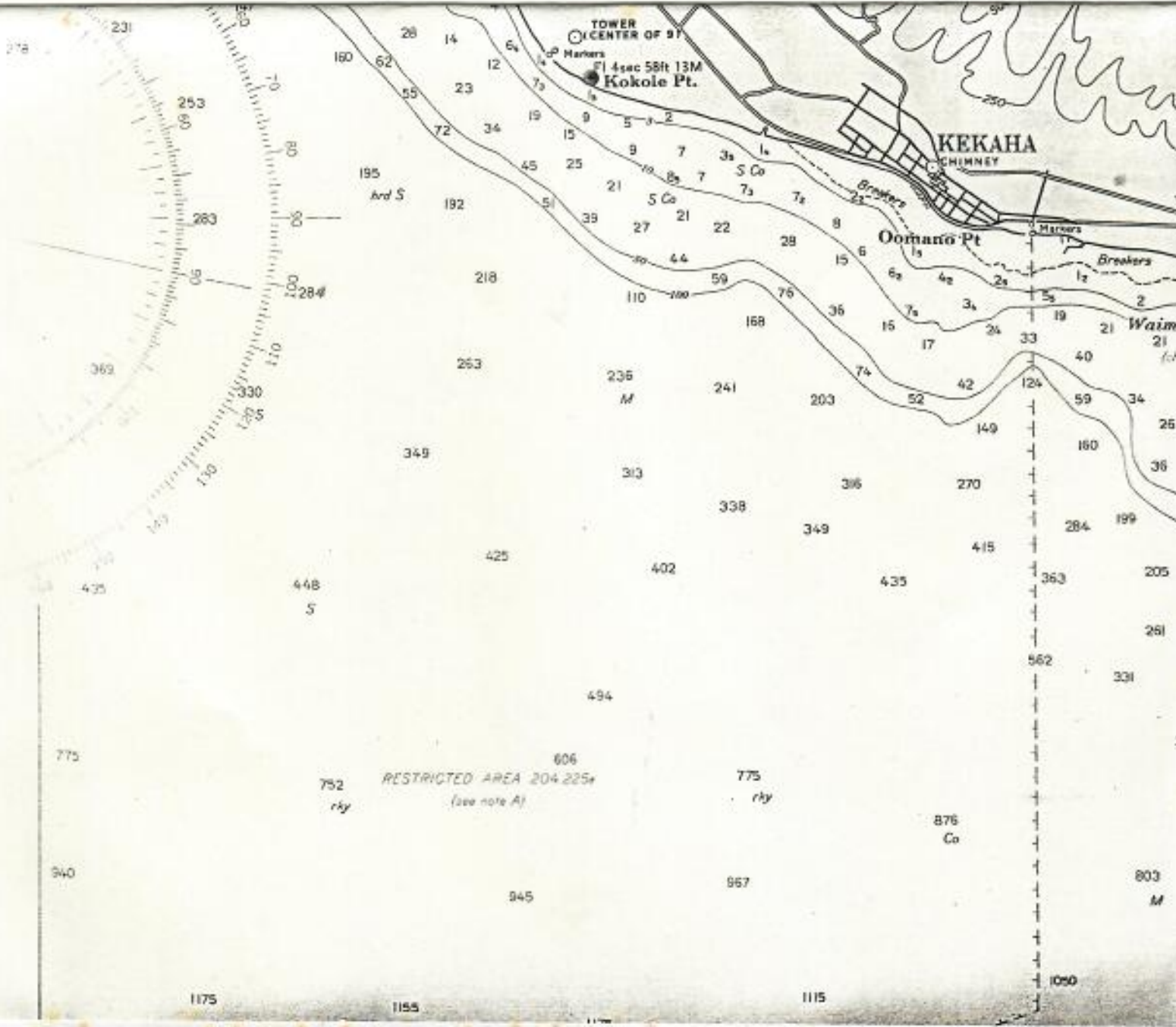
LAUEA NWR

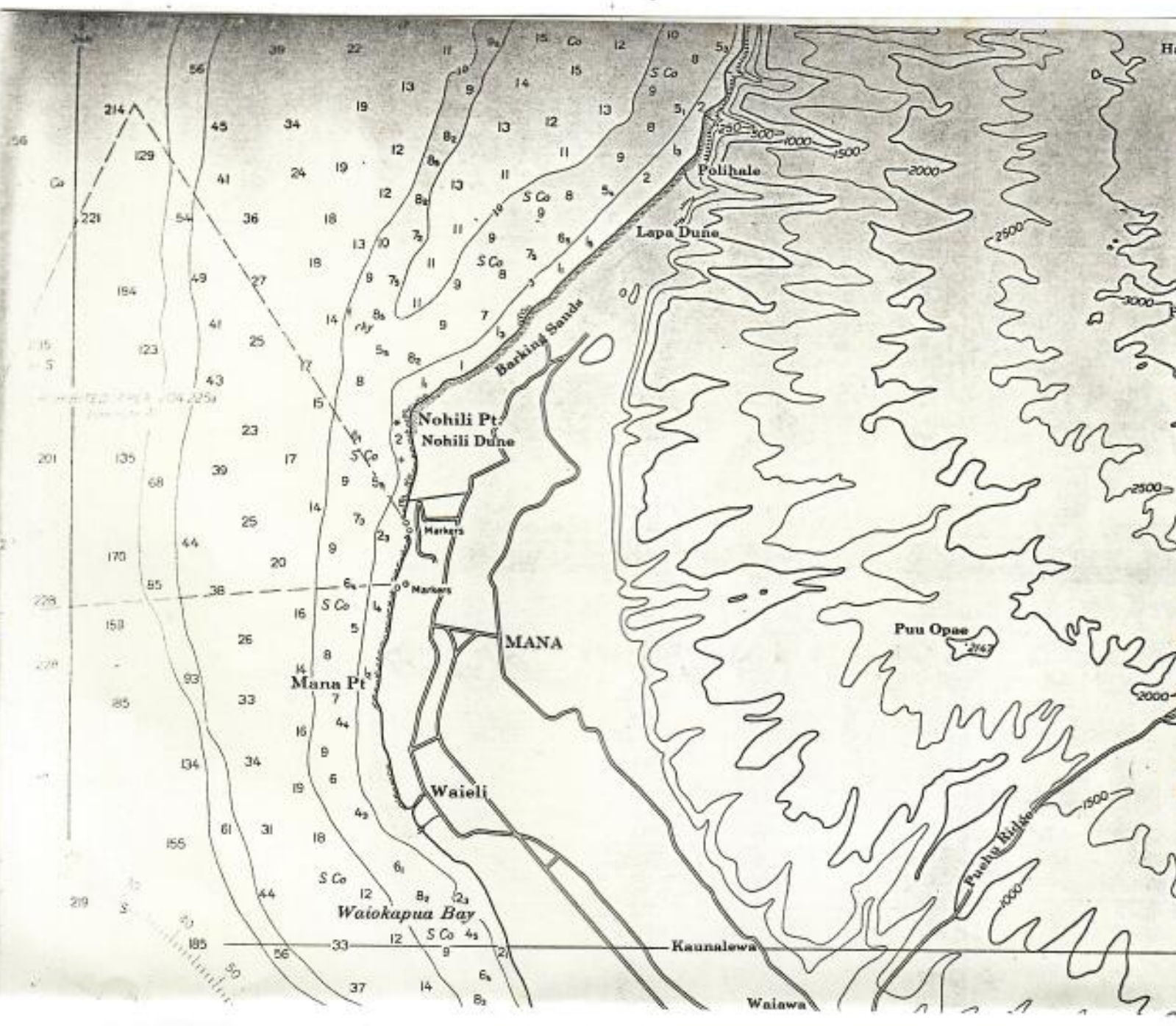
LAUEA, ISLAND OF KAUAI, HAWAII











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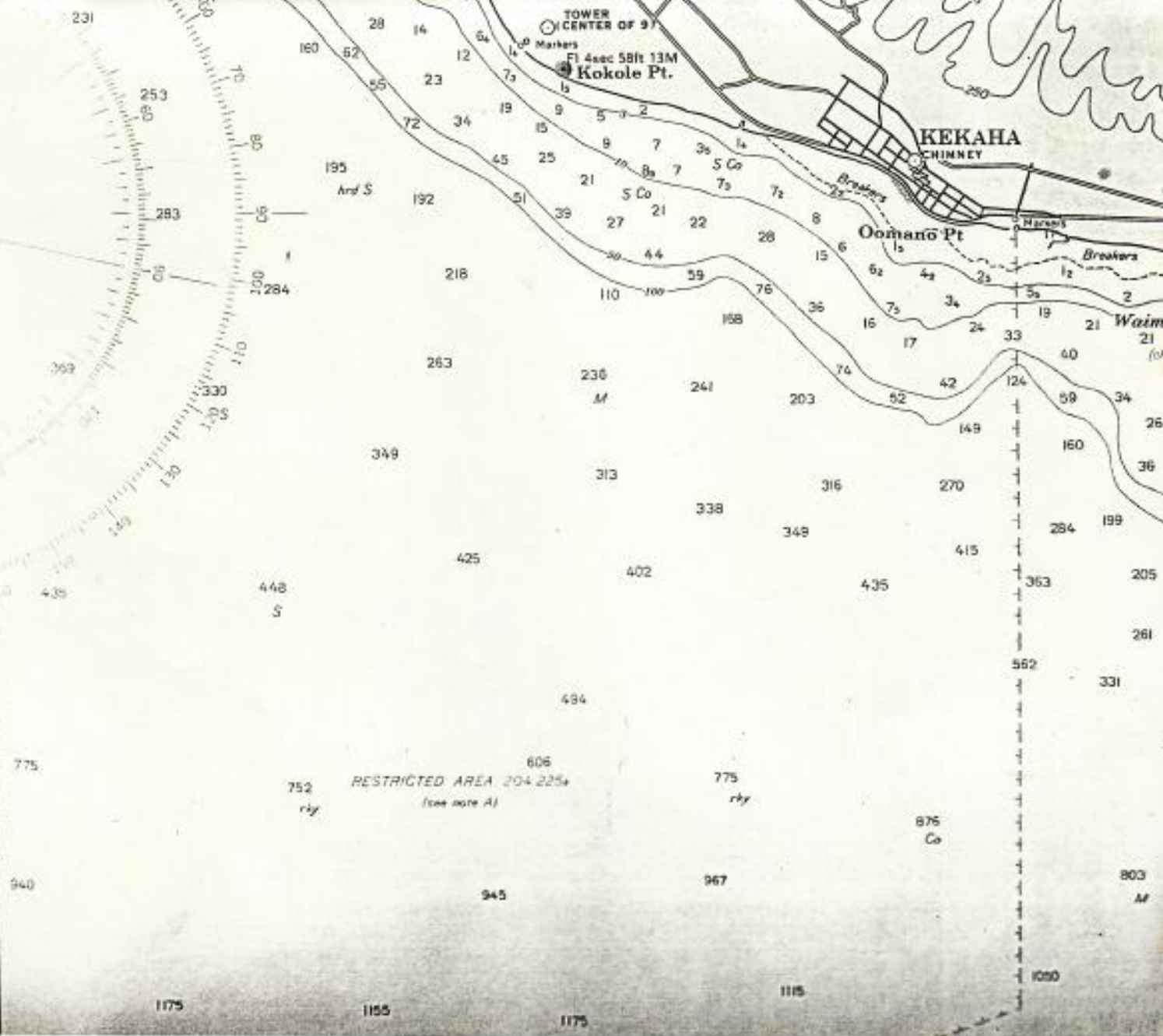
TOWER CENTER OF 97
Markers
Fl 4sec 58ft 13M
Kokole Pt.

KEKAHA
CHIMNEY

Oomano Pt

Waimu

RESTRICTED AREA 204 225+
(see note A)





ARCHAEOLOGY ON KAUA'I

KAUA'I COMMUNITY COLLEGE

RR 1, BOX 216

LIHUE, HAWAII

96766

Vol. 5, No. 2

May 1976

A Publication of the Anthropology Club

of

Kaua'i Community College

Editors: William K. Kikuchi
Delores L. Kikuchi

Catherine Stauder
Byron Cleeland

Since its inception in June 1972, the Archaeology on Kaua'i Newsletter, as stated in Vol. I, No. 1, has had as its basic purpose: "to provide the local community and interested individuals and institutions outside the island a communique of activities and research being planned, undertaken, or completed on Kaua'i." Its goals have been: "to educate, to inform, and to disseminate information and data quickly, rather than to serve as a polished scholarly journal."

In September 1974, Archaeology on Kaua'i officially became a publication of the Kaua'i Community College Anthropology Club, with that organization bearing exclusive responsibility for the editing and reproduction of the publication. While support is provided by Kaua'i Community College in the form of postage and equipment used, the manpower, paper, and mimeograph supplies are provided by the Club.

The members of the Anthropology Club have worked very hard to raise money to support the Newsletter. However, subscriptions have risen from 80 in June 1972 to over 500 in May 1976, and the costs of supplies have inflated accordingly.

On 21 August 1975, the Kaua'i Community College Anthropology Club was officially recognized by the State of Hawaii Department of Regulatory Agencies as "a nonprofit corporation in accordance with the provisions of Section 416-20, Hawaii Revised Statutes." On 30 October 1975, the Club was determined by the Internal Revenue Service to be "exempt from Federal income tax under section 501 (c) (3) of the Internal Revenue Code." In that letter to the Club, W. H. Connett, District Director of the Internal Revenue Service, wrote: "Donors may deduct contributions to you . . ." Similarly, a

letter from the Department of Taxation, State of Hawaii, dated 17 December 1975, reads: ". . . your Application for Exemption from the Payment of General Excise Taxes . . . has been approved . . ."

Our philosophy remains that the goals of the Newsletter are "to educate, to inform, and to disseminate information and data" to interested individuals and institutions and that these goals are best met when subscription is granted only upon request and at no charge. However, in order to alleviate some of our costs, we are announcing that the Anthropology Club will now accept contributions from voluntary donors. These donations are tax-deductible and will be recognized with a receipt upon request. All donations, unless otherwise specified, will be used exclusively in the publication of the Newsletter. Checks are to be made out to Kaua'i Community College (or KCC) Anthropology Club and may be sent to:

KCC Anthropology Club
Kaua'i Community College
RR 1, Box 216
Lihue, Kauai
Hawaii 96766

NŌMILU

by

William K. Kikuchi

and

Catherine Stauder

Situated in the ahupua'a (traditional land division) of *Kalāheo, or Kalaheo, are the lands of *Nōmilu (Fig. 1). The area covers approximately 60 acres and centers around the extinct volcanic cinder cone and lake of the same name (Fig. 2).

Etymology

There are four variants of this areal name: Omomilu, Omomila, Nōmilu and Nomilo. The earliest documentation of the

* Hawaiian place names which have been verified as being correct appear with an asterisk preceding them the first time they appear in each issue.

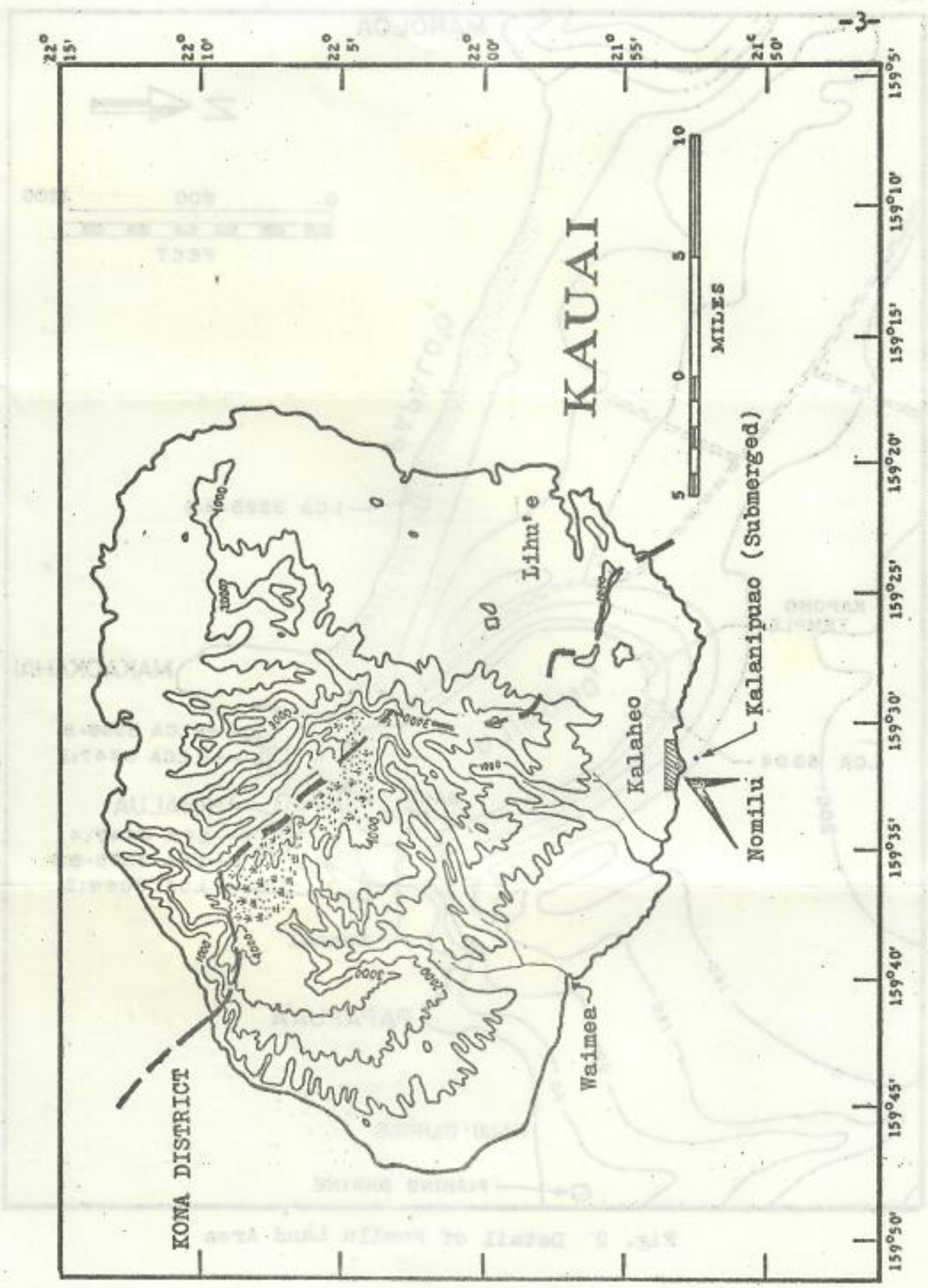


Fig. 1 Kalaheo and the Lands of Nomilu

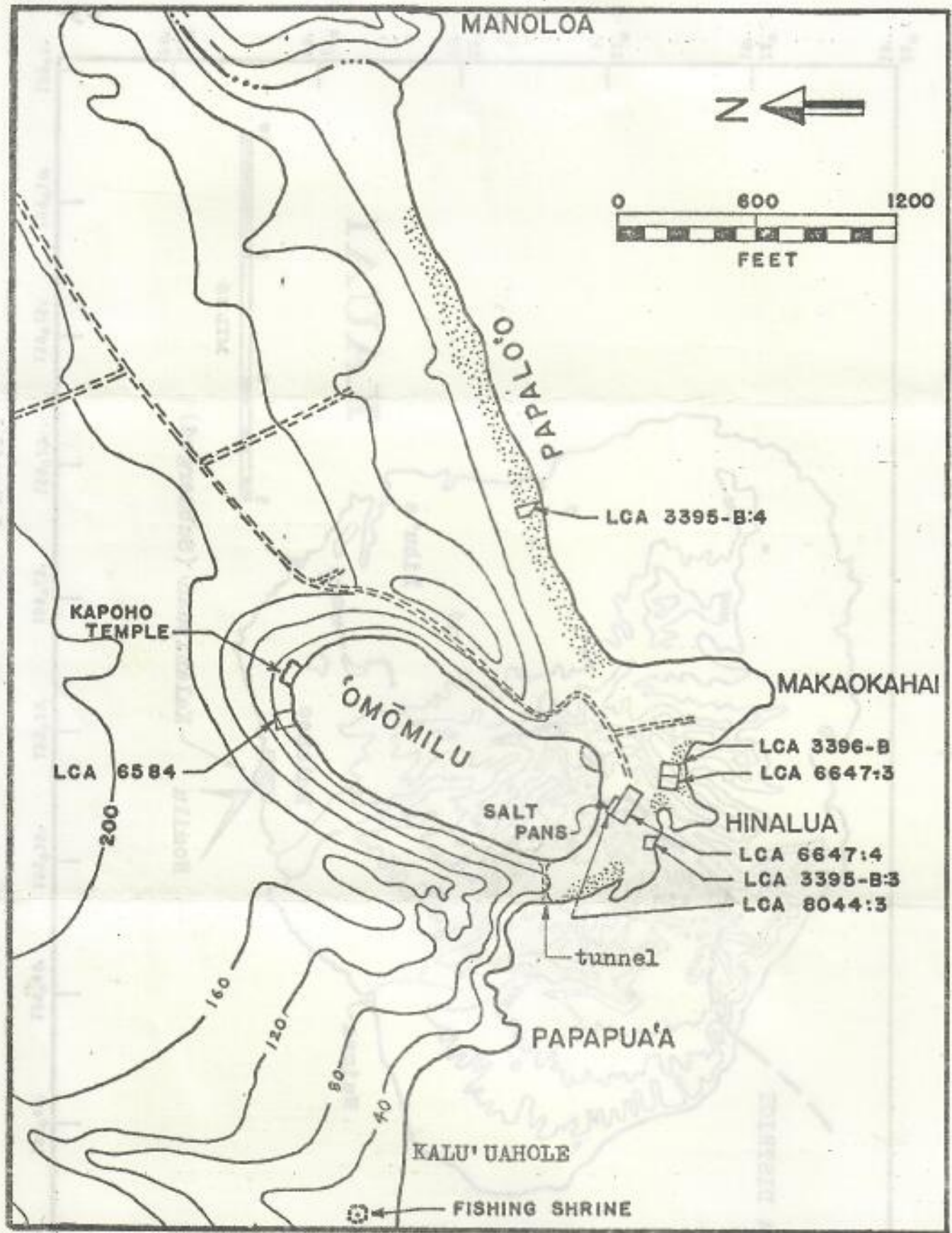


Fig. 2 Detail of Nomilu Land Area

name came from the Foreign and Native Testimony resulting from the Land Court Awards (LCA) of 1848. Land Court Awards (n. d.) 3395-B, no. 4; 8044, no. 3; and 8840, no. 2 called the area Omomilu. Interestingly, though, in the Indices of Awards book (Honolulu 1929:516), which lists the LCA numbers, both Omomila and Nōmilu are given as the land names. The name Nōmilu appeared again in 1854 (Bates 1854:220), 1963 (Kikuchi 1963:32, 33), and 1966 (Pukui and Elbert 1966:21). Nomilo appeared in 1901 (Cobb 1902:427) and in 1968 (Honolulu 1968). On two tapes in the Bernice P. Bishop Museum (BPBM), H62-D and H41-Y-5, it is claimed that the area was named after a mo'o, a supernatural guardian and demigoddess of pools and ponds.

The foregoing information leads us to analyze the name in the following manner; Omomilu, being the oldest documented name, becomes the base of this interpretation. It can be written as 'O-mo-milu or 'O-mo'o-milu. 'O is the "particle and clitic marker marking the subject, being especially common before the names of people" (Pukui and Elbert 1957:252); mō is short for the word mo'o (Ibid., p. 229); and milu is the name of the Hawaiian underworld (Ibid., p. 228). It must be stressed here that this has been purely an academic exercise and not to be construed as the final interpretation.

Geology

The formation of Nōmilu crater (Bennett site no. 67; Kikuchi site no. 39; BPBM site no. B6-1; State of Hawaii site no. 50-30-10-67) began within the geological time locally termed the *Kōloa Volcanic Series, roughly within the Pleistocene Epoch, or between 3,000,000 and 15,000 years ago. Toward the end of the Kōloa volcanic activity, a series of cinder cone eruptions formed 40 visible hills running in a north-south direction. Three of these hills are found in the area of coastal Kalāheo: Kapeku, Ioleau, and Nōmilu. According to Macdonald (Macdonald et. al. 1960:69), Nōmilu cone is "composed largely of cinder, partly weakly welded and partly cemented with calcium carbonate deposited by percolating water."

Erosional forces have most markedly affected the coastal margin of the water-filled vent. Eustatic changes in Pleistocene times opened the cone, but formation of a permanent embayment was prevented by the presence of a rather large, undated pāhoehoe flow which provided an effective barrier to the sea's erosional forces. A sizeable sand barrier beach also helped deter formation of a permanent opening to the sea. Springs along the western side of the pond (Fig. 2) provide fresh water, and salt water percolates into the pond through its sand and cinder sides. Daily tidal fluctuations further influence the water supply.

Myths and Legends

Associated with the genesis of Nōmilu is Pele, Goddess of the Volcano. In her search for a suitable home, Pele unsuccessfully dug on *Ni'ihau Island. After arriving on *Kaua'i, she dug first on *Pu'u-ka-Pele, or the Hill of Pele, in the *Waimea Canyon Area, and then moved on to Nōmilu. Being very thirsty, the Goddess dug three holes as she searched for fresh water; however, the sea kept rushing in, causing her to become very frustrated. Angrily, Pele left Kaua'i and moved on to *O'ahu Island (Bates 1854:217).

Perhaps because of the direct association with Pele, numerous local accounts of seemingly recent volcanic activity at Nōmilu have evolved. In notes written by Elsie Wilcox (Wilcox 1923), Alexander McBryde is recorded as saying: "Magnesia shown by analysis of water Sulfur cracks on bottom which once in many years let off fumes into pond-volcanic connection. Sometimes fish entirely killed off by this. Last time about 8 years ago." Local residents of nearby *Lāwa'i Stables, Camp 10, reported in personal interviews that around 1956 the pond was covered with a yellowish residue that smelled of sulphur. Many of the fish in the pond died and were seen floating on the surface. One informant said that about this time the sea off the pond as far out as the submerged rock known as Ka-lani-puao bubbled with sulphurous fumes (Fig. 1).

The only other mythological characters associated with Nōmilu, although indirectly, are the menehune, Hawaiian dwarf-like beings. According to Rice (1923:41) and Luomala (1951:14), the menehune had constructed a monument on the top of a mountain prior to leaving Kaua'i. Upon completion of the task, they shouted so loudly that the fish in the pond of Nōmilu jumped in fright. Evidently, Nōmilu was associated in Hawaiian mythology with antiquity.

The pond of 'Omomilu, or Loko 'Omomilu, evolved simply through the utilization of the water-filled crater as an aquatic site, which, according to an article in The Garden Island Newspaper (The Garden Island 1922), was ". . . from time immemorial . . . the banner fishpond of the islands, particularly famous for its fine mullet." Cobb (1902:430) noted that the pond measured 19.5 acres in extent. The earliest description of the fishpond came from Bates (1854:217-219):

Five miles west of Koloa is a small lake, called by the natives Loko Nomilu. The lake itself is a great natural curiosity . . . It is three hundred yards long by two hundred wide, and has a submarine union with the ocean . . . There were no men . . . on the premises; and two women excepted, the village was temporarily deserted [sic]. There were several canoes on the shore; but the lake was much disturbed

by a heavy north wind, so that they would have been rendered nearly useless.

Bates asked the two women to gauge the depth of the pond, and they willingly swam and floated on a wiliwili log (Erythrina sandwichensis) to the middle of the pond. Bates (1854:220) continued: "An examination of the sounding-line satisfied me as to the depth of the lake. I found it to vary from five to eleven fathoms."

Cobb (1902:427) stated: "the Nomilo fishpond at Lawai, on Kauai, is formed from an old volcanic crater with an opening toward the sea, across which a wall has been built, and as the opening is below the surface of the sea the tide plays in and out when the gates are opened." Bennett's description refuted Cobb when he wrote (Bennett 1931:116): ". . . the fishpond is a large, natural, salt water pond with no artificial work done to it." He continued by writing that the pond was ". . . intended primarily for the raising of fish" (Ibid., p. 24). Cobb did observe that, even in 1901, Nōmilu was used commercially as a fishpond; however, his comments concerning the opening below the surface and the gates are puzzling. His implication was that an underwater tunnel access to the sea existed, although none has been discovered recorded in other sources or found by on-site inspection. His comment concerning the gates implies the existence of additional surface tunnels and sluice grates, makahā, for which some supportive evidence can be seen upon inspection. Informant Yoneo Shimamoto (see Reminiscences of Yoneo Shimamoto, this issue) stated that around 1921 his father excavated the existing tunnel. Evidently, an earlier one had been quickly plugged up with silt from the sea. On the seaward side of the fishpond is evidence of a ditch now almost completely silted in with fine, volcanic ash-cinders. The second tunnel was constructed by Mr. Shimamoto's father using a hammer and cold chisel. He worked into the cinder cone wall for nearly 46 meters to form a tunnel approximately 1.2 meters wide and 1.5 meters high, which means that about 84 cubic meters of cinders were excavated and hauled away. Both the seaward and pond ends of the tunnel were lined with concrete and had sluice grates installed in them. The net effect of the tunnel was to allow for freer circulation of water between the sea and the pond and, more significantly, to open a pristine aquatic habitat to ocean predators and other marine life.

A Kaua'i Landmark: Wahi-pana

Besides the fishpond, Nōmilu was noted also for its salt pans (Bennett site no. 67; Kikuchi site no. 41; BPBM site no. B6-1; State of Hawaii site no. 50-30-10-67) and the red-colored salt gathered from the pans (The Garden Island 1922). So famous was the Nōmilu area that it was called a wahi-pana. Wahi-pana was a Hawaiian classification for sites

which were usually located in fairly isolated areas, but whose fame was so widespread that no visitor could claim to have seen an island if he had not visited these sites.

The salt pans of Nōmilu are easily discernible today. LCA 8044, no. 3 and LCA 3395-B, no. 4 (n. d.) both identify these as salt pans; the former LCA went to Kupihea and Paele and the latter to Keoua. Claimant Keoua stated that the salt pans were the property of his wife, who, in turn, had received them from her parents. Salt produced in these pans was taxed by the land steward, konohiki, who claimed a share to all produce of the land.

Wells were dug near the salt pans to provide the water from which salt was crystalized. This water was said to have been exceptionally salty (Bennett 1931:24). The pans themselves were made by building up walls of clay and earth in a generally rectangular shape and then lining the walls with a light-colored clay that came from the same area, possibly from the excavated wells (similar present-day practices are still followed at the salt-making pans near Hanapēpē on Kaua'i). The floor of clay was pounded with the butt-end of a coconut frond and probably smoothed over with a stone, while the walls were kept sufficiently moist to prevent cracking. The result was a salt pan impervious to leakage and percolation. Bennett (1931:24) noted that Alexander McBryde " . . . in his youth . . . helped the Hawaiians make salt in the beds next to the Nomilu fishpond . . . " and that McBryde remembered " . . . that the water was let in from the large fishpond into the smaller pans where it was allowed to stand for a long time while some of the water evaporated."

Archaeological Sites

A number of supporting archaeological and historical sites should be mentioned in conjunction with Nōmilu. According to Informant Shimamoto, the Hawaiians who knew of Nōmilu told his family that a burial cave was located on the slope of the crater. This they referred to as a god-house. Shimamoto also said that a levelled area with a shack and grave surrounded by a stone wall could be found there.

Thrum (1907:37) was the first to record the presence of Kapoho temple at Nōmilu (Bennett site no. 68; Kikuchi site no. 42; BPBM site no. B6-2; State of Hawaii site no. 50-30-10-68): "A large heiau [temple] mauka [inland] of the fishpond; destroyed some years ago. Portions of its division walls yet to be seen." Bennett (1931:116) remarked:

On the northwest corner of the pond a wall extends 80 feet along the edge of the pond, and in rough fashion extends inland at each end though the work is not very distinct. The front part of this wall is about 3 feet in height from which height it slopes back and downward to the ground, giving a

triangular cross-section. The wall is of very loose construction.

The sloping sides of the crater had terraces (Bennett site no. 67; Kikuchi site no. 40; BPBM site no. B6-1; State of Hawaii site no. 50-30-10-67) which were faced with stone. These are probably those reported by Bennett (1931:116) as "Walls back of the pond" and by Kikuchi (1963:33).

A careful survey would likely reveal a greater number of sites in what is now an area tremendously overgrown with vegetation. Archaeologically, these undisturbed sites in the Nōmilu area should yield a great amount of data on fishing activities. It is hoped that this review will spur further historical research and solicit informants to provide additional information.

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REMINISCENCES OF NŌMILU

by

Catherine Stauder

Reminiscences of Alexander McBryde

Alexander McBryde, owner of Nōmilu Fishpond in the early 1900s, gave Miss Elsie Wilcox interesting information

about the site. Miss Wilcox's notes, on deposit in the Kaua'i Historical Society's files, are the source for the first part of this article.

McBryde stated that in legendary lore Nōmilu was the spot from which Pele, the Goddess of the Volcano, left Kaua'i. In the bottom of the pond were three holes which she had dug in her search for drinking water. Also, there were supposed to be cracks in the bottom of the pond through which sulphur fumes escaped, killing the fish. About 1916, all of the fish in the fishpond died, supposedly from this cause.

At the time of the interview, Mr. McBryde was leasing the pond to a Japanese fisherman for \$300.00 a year. The latter was selling the fish caught and was keeping the pond in good condition. Previously, the fish had died because of overstocking. The fisherman had built a tunnel through the hillside to connect the pond with the ocean, and gates were installed to control fish movement. When the tide rose and entered the pond through the shallow tunnel, the fish would rush into the tunnel in an attempt to get to the sea; the fisherman would shut the grates and scoop out the fish he wanted. McBryde believed this to be an ancient Hawaiian fishing technique used at Iaukea's fishponds at Hale-'iwa on O'ahu Island.

The edge of the pond was lined with small stones set close together, providing compartments to protect the small fish from larger ones.

Salt pans were located between the pond and the sea where salty springs welled up. These pans were lined with a limey clay, which was pounded down in place with a coconut frond butt and which made a good "concrete" floor, light in color. In 1923 the salt pans were owned by Mrs. Lily Auld.

A small flat rock called Ia'a-o-uka guarded the salt pans from the inland rains which would have melted any encrustation. Similarly, a large stone on the shore, Ia'a-o-kai, kept the seaward rains away. Between midnight and 3:00 a.m., the keeper of the salt pans, usually a woman, would place an offering on Ia'a-o-uka to ensure a bountiful salt harvest. If any noise was heard, such as the bark of a dog or the chirp of a seabird, the spell would be broken and the efficacy of the ceremony spoiled for that time.

Reminiscences of Yoneo Shimamoto

Mr. Yoneo Shimamoto is the son of the man who leased the fishpond from Alexander McBryde. Shimamoto lived with his father at Nōmilu from about 1914 to 1925.

He reported that his father raised such fish as mullet (Mugil cephalus); moi (Polydactylus sexfilis), or threadfish; and awa (Elops machnata), or tenpounder, among others. Since mullet would not breed in the pond, the

father used to hire a sampan to go to the river at Lāwa'i or Hanapēpē where schools of mullet were known to congregate. The young fish were netted and loaded in tubs onto the boat. Then, back at Nōmilu, they were taken in buckets to shore in a rowboat and dumped into the pond, where they were left to mature.

The Shimamotos used to get up around 1:00 a.m. to start fishing. Nets were lowered from their boat to a depth of about 7.5 to 9 meters, and it took three men to bring in the haul. The father peddled the fish as far away as Līhu'e, first in a horse-drawn cart and then in a pickup truck. One of the younger Shimamoto's tasks was to repair the nets after his trek home each day from school in Kalāheo.

About 1921 the elder Shimamoto dug the tunnel which now connects the pond and the sea. On the pond end was a gate to prevent the fish from escaping at high tide. Earlier, Shimamoto had attempted to dig another tunnel, but he was unsuccessful because the ocean quickly plugged the excavation with silt.

When Yoneo Shimamoto was about nine years of age (about 1916), all of the fish in Nōmilu died, causing his father to decide to give up the lease to the pond. Mr. McBryde persuaded him to stay on, agreeing not to charge any rent for a period of three years, for it would take that long before Shimamoto would be able to make a living from the restocked pond.

Mr. Shimamoto said he later heard stories that when Kilauea crater on the Island of *Hawai'i erupted, the fish in Nōmilu died. However, when his family lived at Nōmilu, they received no newspapers, so they would not have been aware of any eruption. Shimamoto has no memories of any sulphur odor around the fishpond.

The first Shimamoto family home at Nōmilu was a grass shack, made from river reeds lashed to bamboo framing. The roof was constructed of reed covered with grass, and the floor was wood over a rock foundation. Later the father built a timber addition with a metal, sheet-iron roof.

After the Shimamoto family left Nōmilu, a Mr. Kawata obtained the lease and, after him, the Sakugawa family. Mrs. Sakugawa was a sister of Yoneo Shimamoto.

ARCHAEOLOGY ON KAUAI
Kauai Community College
RR 1, Box 216
Lihue, Hawaii 96766



Mr. George Balazs
P. O. Box 1346
Kaneohe, Oahu
Hawaii 96744

A-5 July 29, 1981 Honolulu Advertiser



Oahi

Hawaiians perform
"oahi" on Kauai
near Kalalau lookout
in Kokee:

Impressive, but short
of spectacular
because of light
winds.

Carmichael

*Re-creation of 'oahi' rite
provides lots of fireworks*

By Jan TenBruggencate
Advertiser Kauai Bureau

LIHUE — The ancient Hawaiian tradition of aerial fireworks is the subject of renewed interest, particularly since a modern recreation of the technique was filmed last month for use in a movie on Hawaii.

The fireworks were called "oahi" and apparently occurred only on Kauai, over the cliffs of the Na Pali coastline.

Their origin is unclear, but they apparently pre-date the arrival of Europeans in Hawaii. Missionary Hiram Bingham saw one of the firefalls in 1821, when he traveled around Kauai with Liholiho.

The ancient spectacles were performed thereafter for other visits by royalty, for such celebrations as marriages and, presumably, for show.

Reports from the late 1800s and early 1900s recall firefalls performed for steamers going along the Na Pali Coast. Sometimes, steamers full of people would go out just to witness the events.

The last of the traditional oahi was performed in the mid-1920s, sponsored by the Order of Kamehameha. It fell from the cliffs of Nualolo-kai, one of the Na Pali valleys, but very light winds reportedly made it a less-than-satisfactory show.

There have been no further oahi since then. The last person to have participated in one was the late Laa Mahuiki of Kauai's North Shore, according to Frank O. Hay, who began studying oahi some years ago.

"Evidently it's a very old Kauai custom," Hay said.

As he learned more about it, Hay became obsessed with recreating an oahi. He finally sold the idea to MacGillivray-Freeman Films, which has been making a movie, "Behold Hawaii" and filming on Kauai this summer.

He gathered three Hawaiians: Samson Mahuiki, son of the late Laa Mahuiki, Laa Chandler, who was named for him, and Barlow Chu, another North Shore native who remembers hearing firsthand accounts of the oahi. They were joined by Billy Kapahulehua, Ron Mahelona and Wendell Pu in setting up an oahi.

The traditional locations were the cliffs above

Haena, the ones at Nualolo-Kai and at Milohi. But at each site, the difficulty of bringing in movie equipment and materials for the oahi proved too great.

They decided on a non-traditional, but cinematically suitable location, Puu Kila, near the Kalalau Valley lookout in Kokee. It overlooks a valley instead of the ocean, but otherwise approximates conditions of the actual sites, Hay said.

Hay had dried stalks of light wood and some were soaked in kerosene — an approximation of the kukui nut oil some sources say were used by the Hawaiians of old.

Majuiki, Chandler and Chu, dressed as pre-contact Hawaiians, lit the wooden shafts and hurled them over the cliff.

It was impressive, Hay said, but like the last oahi in the 1920s, light winds kept it from being spectacular.

Traditional materials, according to written accounts, were the wood of the hau and papala. Hau is a hibiscus relative whose light wood was used for fishing floats and outrigger canoe thwarts and floats.

Papala is a member of the amaranth family, which botanist J.F. Rock described as "soft and fibrous, and when dry exceedingly light, and will burn like paper. It is the very tree which was used by the natives for a most original and grand display of fireworks, owing to the easiness with which the wood can be ignited."

The Hawaiians would climb the cliffs carrying sticks. Some say the sticks had been dried below and were carried up ready to burn. Others, including Otto Degener in "Plants of Hawaii National Park," said they'd carry up green sticks which were left to dry, and used the ones left there the time before.

The sticks were oiled to burn more brightly. After dark, as a waiting audience sat below on land and in canoes, the lighted sticks would be hurled off the cliffs like spears. Sometimes burning kukui nuts were also tossed over.

"As fast as these sticks were lighted, the performers cast them into space until, to the spectator below, the sky appeared to be ablaze with scores of comets and shooting stars rising and falling, darting seaward or receding toward the cliffs, crossing and recrossing each other in the most fantastic way," Degener wrote.

On a good night, the trade winds rushing up against the cliffs apparently could keep a blazing stick aloft long enough for it to nearly burn to ashes.

Young men tried to grab spent firesticks and branded their arms to prove they'd witnessed an oahi, so special was the ceremony, Degener said.

Hay said he would like to put on a traditional oahi at one of the traditional locations — perhaps the cliffs at Haena — so people can see it without having to go out in boats.

He said he's shooting for next year.



Frank Hay

April 1, 1981

Mr. Francis T. Hosaka
Kekaha, Kauai 96752

Dear Mr. Hosaka:

I am writing to ask for your assistance in obtaining up-to-date information on green sea turtles that live in coastal waters and possibly nest on sand beaches of the Island of Kauai. Which ^{nearshore waters} shoreline areas of your island are turtles known to be the most abundant? Are you aware of any nestings that have taken place in recent years? If so, what beach locations were utilized? *Are you aware of any turtles being captured during past years that were tagged?*

Any and all help that you can provide to this request will be greatly appreciated. For your convenience, I have enclosed a map of Kauai for use in marking the areas of importance and interest for turtles.

Sincerely,

George H. Balazs
Assistant Marine Biologist

GHB:md

Enclosure

Letter also sent to:

Mr. Sam Lee
2660 Kaheka
Koloa, Kauai 96756

Mr. Masao Ninomoto
Hanalei, Kauai 96714

Mr. O. D. Moses
5782 Lauhoa Place
Kapaa, Kauai 96746

Same letter to:

Mr. F. W. Knoch
Box 327
Koloa, Kauai 96756

Mr. H. Kato
Box 332
Koloa, Kauai 96756

Mr. Valpoon
4262 Anahola Rd.
Anahola, Kauai 96703

Owner/Manager
Kauai Divers
RR1, Box 56
Koloa, Kauai 96756

April 14, 1981

Mr. John Barretto
5405-A Kawaihau Rd.
Kapaa, Kauai 96746

Dear Mr. Barretto:

I am writing to ask for your assistance in obtaining up-to-date information on green sea turtles that live in coastal waters and possibly nest on sand beaches of the Island of Kauai. Which near-shore waters of your island are turtles known to be the most abundant? Are you aware of any nestings that have taken place in recent years? If so, what beach locations were utilized? Are you aware of any turtles being captured during past years that were tagged?

Any and all help that you can provide to this request will be greatly appreciated. For your convenience, I have enclosed a map of Kauai for use in marking the areas of importance and interest for turtles.

Sincerely,

GEORGE H. BALAZS
Assistant Marine Biologist

GHB:ec

Enclosure

inquiry sent 8/21/81

the province

2250 GRANVILLE STREET, VANCOUVER, B.C., V6H 3G2

January 23, 1981

Miss Margie Stinson,
1553 Avocado Drive,
Vista, Ca., 92083,
U.S.A.

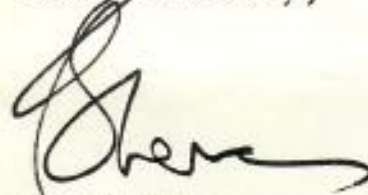
Dear Miss Stinson:

It is hardly likely to be of much help to you, but since Vancouver Aquarium urges turtle-spotters to write you, here is a brief report.

On January 16, at 8:30 a.m., I watched two (green) turtles in caves off the Sheraton Hotel on the south shore of Kauai.

They were at 45 feet, in water of 76 degree F. We saw them by flashlight when they had presumably been sleeping. One was 4-5 feet along the shell, the other considerably smaller. We watched for perhaps 10 minutes, but left when the bigger one became a bit nervous and started swimming in circles. Nobody touched either one.

Yours sincerely,



P. Sherman,
Publisher.

JOC

August 31, 1981

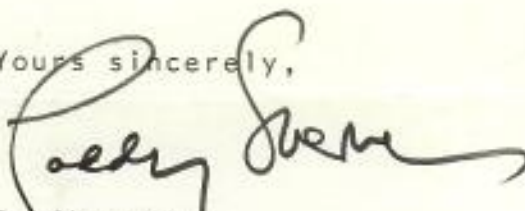
Mr. George H. Balazs,
Assistant Marine Biologist,
University of Hawaii,
P.O. Box 1346,
Coconut Island,
Kaneohe, 96744,
Hawaii.

Dear Mr. Balazs:

When I saw the turtles mentioned in my letter of January 13, I was in a group led by the West Wind Diving Centre at Koloa. Larry, who runs it, knows the caves well, and I'm sure will give you more precise information than I can. It was a night dive - 8:30 p.m. - not a.m. as my letter noted.

Thank you for sending the turtle information.

Yours sincerely,



P. Sherman,
Publisher.

JOC

Sept. 15, 1981

Dear George -

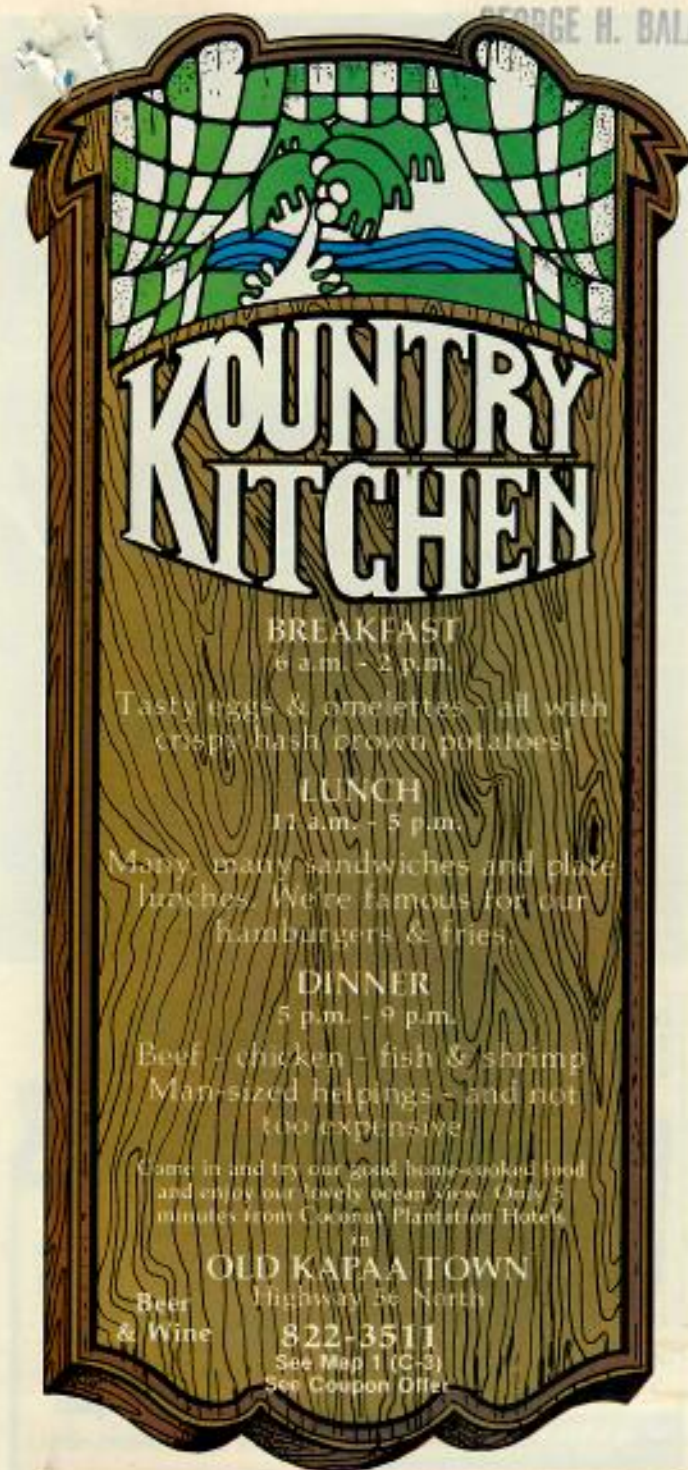
Thank you for your phone call and interest in speaking to our group of volunteers. Our meeting on December 3rd will be perfect and we have put out the word in our newsletter about your talk. I'm sure we'll have a good turnout for you. One thing I would like to ask you about on a personal level is the career potential in the oceanography field. I attended the U.S. Naval Academy and majored in Oceanography. Over the years I have remained very active with water activities, my latest being working with the Kauai Underwater Assn and the recompression chamber. I have the G.I. Bill to use for college and have been considering going back to college for an advanced degree. Oceanography and related fields are my love but I know little of their career potential and availability of good jobs. On that matter, which areas have the greatest demand for new professional people and growth potential. I know these things are hard for you to answer when you have no idea of my experience or capabilities but any guidance or recommendations you could make would be greatly appreciated. Looking forward to seeing you in December.

Sincerely,

John M. Fairland

P.O. Box 188

Kapaa, Hi. 96746



KOUNTRY KITCHEN

BREAKFAST
6 a.m. - 2 p.m.

Tasty eggs & omelettes - all with
crispy hash brown potatoes!

LUNCH
11 a.m. - 5 p.m.

Many, many sandwiches and plate
lunches. We're famous for our
hamburgers & fries.

DINNER
5 p.m. - 9 p.m.

Beef - chicken - fish & shrimp
Man-sized helpings - and not
too expensive.

Come in and try our good home-cooked food
and enjoy our lovely ocean view. Only 5
minutes from Coconut Plantation Hotel.

OLD KAPAA TOWN
Highway 56 North

Beer & Wine **822-3511**
See Map 1 (C-3)
See Coupon Offer

The shirts are also featured in long, sleeve and french cuts. You'll enjoy their fine acrylic and air-brushed seascape paintings by a local artist. Stop by and say hello to Debbie, who is offering a 10 percent discount with the ad in this issue.

Tropical Taco, Kapaa Shopping Center, next to the post office, Kapaa (822-3622). They have a reputation for serving the biggest and best tacos and burritos in Hawaii. They specialize in handmade tortillas and meals made freshly from scratch. The latest speciality is the "fish taco," right from the streets of Mexico. They claim it will lift you off the ground.

Waipouli Chop Suey, Waipouli Plaza (822-3911). If you are in the mood for excellent Chinese food, Waipouli Chop Suey offers

an extensive a la carte menu, along with plate lunch specials and even nine-course dinners for two or more persons. Entrees include soups, duck, seafood and over 20 choices of pork, beef and chicken dishes. They also have several noodle dishes and over 10 Japanese dishes. Very reasonable prices. Open daily except Wednesday.

Waipouli Restaurant, Waipouli Complex (822-9311). Try their special breakfast eye-opener, served all day from 7 a.m. For \$2.95 you get two eggs with your choice of bacon, sausage, spam or ham with rice or toast. Orange juice or coffee is included and the second cup of coffee is free! For lunch or dinner, try their fine shrimp and crab tempura. Dinners start at just \$3.80. Open daily except Tuesday from 7 a.m. to 9:30 p.m.

KILAUEA

See Map 2 on Page 32

The small village of **Kilauea** is noted for its **Kilauea Lighthouse** and the **Kilauea Silperry Slide**. The slide, tiny falls and swimming pond (made famous in "South Pacific") are now closed to the public, but the lighthouse grounds are open to visitors.

Kilauea Point is a 31-acre site situated on the rugged northeastern coastline. This former Coast Guard lighthouse is now administered by the U.S. Fish & Wildlife Service for the protection and enhancement of the eight species of seabirds that frequent the area.

One of the few nesting colonies of red-footed boobies found on the main Hawaiian Islands can be seen from the Kilauea Point lookout. An estimated 3,000 wedge-tailed shearwaters nest in burrows along the steep cliffs that surround Kilauea Point. The red-tailed and white-tailed tropicbird and greater frigatebird are seen on a regular basis by visitors. **Green sea turtles** and spinner porpoises can be seen the year round frequenting the waters surrounding Kilauea Point.

The Kilauea Point Lighthouse is on the National Register of Historic Places. The structure was built in 1913 and has the largest lens of its kind in the world. The lens is made of individual hand-polished crystal prisms which were able to reflect light more than twenty miles out to sea. The lighthouse became obsolete in 1967 when an automated light was installed at the point.

Kilauea Point is open to the public between noon and 4 p.m. daily except Saturday. Visitors can park at the end of the road, then walk the short distance to the lookout. Plan about half an hour for the self-guided tour which includes several interpretive displays and exhibits. The exhibits are helpful in explaining interesting facts about the native vegetation, wildlife and natural history of the area. There is also an exhibit room which focuses on the unusual wildlife of the northwestern Hawaiian Islands.

Kong Lung Company, on the road to Kilauea Lighthouse, Kilauea (828-1731). Established in 1892, Kong Lung Company is the only preserved plantation store on Kauai. Take some time out on the way to or from the Kilauea Lighthouse to see the historic building and the excellent variety of shopping items the store now offers. They have finely-crafted island wood products, select Hawaiian apparel, antiques and gifts of interest to residents and visitors alike. You'll also find books and gift items that they'll ship directly to

the Mainland.

The Farmer's Market, at Kong Lung, Kilauea (828-1512). Take the Lighthouse Road in Kilauea to The Farmer's Market, which is in the famous old store known as Kong Lung. The market has the same great selection of fruits and vegetables offered at their Kapaa store. They have the widest selection of imported beer on the island, as well as a nice selection of wines and cheeses from around the world. Open daily from 8:30 a.m. to 8 p.m.



Rib'n Tail
Kapaa, Hawaii
822-9632

Lunch Mon.-Fri.
11 a.m. - 2 p.m.

Dinner 5:30 Daily
Happy Hour 2-5

Bruce Tomlin
Piano Bar
7 p.m. until
closing
Wed.-Sun.

Dinners from \$7.95 include Home Made Soup or a very notable Salad, your choice of dressing, Rice and Hot garlic bread.
Prime rib, choice steaks, fresh fish, lobster, prawns, chicken viandino and other excellent house specialties.

10% discount with this ad for lunch and dinner (during 5:30-7)

Kai, as well as vacation spots around the world with this time sharing concept. Pono Kai is one of Kauai's most prestigious beachfront "condomaximums," so call for an appointment to inspect their units and learn more about time sharing.

Lina's Boutique. Waipouli Complex (822-1422). Lina's offers a wide variety of fashions including T-shirts, wrap shorts, a new line of wrap jumpsuits and aloha wear for men, women and children. If a visitor falls in love and needs a wedding gown in a hurry, Lina's will take care of it in a jiffy. They also have fine jewelry, like the unique maile leaf, and they do custom sewing and alterations, with two days notice. Present their ad from the KAUAI DRIVE GUIDE and receive 15 percent off!

Kountry Kitchen. Highway 56, Kapaa (822-3511). It's a favorite with visitors and residents, offering breakfast, lunch and dinner, open daily 6 a.m. to 9 p.m. Few places offer such outstanding dinners at such low prices (steak and crab dinner for just \$8.55). The great variety of choices includes soups, fish, steaks, salads and at least five homemade desserts made fresh daily. They also feature children's portions. They are popular for breakfast omelettes and quarter pound burgers on giant sesame seed buns. (See tear-out coupon.)

Magoo's Pizza. Kapaa Shopping Center (822-9816). One of Hawaii's most popular pizza shops, Magoo's offers over 31 varieties of pizza, plus their famous combination and vegetarian specialties. They also have sandwiches, chicken dinners and a chef salad. They deliver to the Kapaa and Waimea areas for a minimal fee. (See tear-out coupon.)

The Mandala I. 1384 Kuhio Highway, Kapaa (822-3351). An old bank now houses a very interesting assortment of jewelry, beads, paper wallets, petroglyph T-shirts, tapa cloth and old Kauai goodies. The Mandala invites you to "take a little of the islands home with you." Their T-shirts, which come in a fine array of styles any colors, are made right here on Kauai. You'll enjoy the excellent selection of Hawaiian greeting cards, too, which make perfect surprises to send to friends back home or save for future correspondence. In addition, they have tote bags and hats for the beach, decorator items to enliven your interiors and paraphernalia for extras. Basic jewelry-making is cheerfully taught!

Mike McCormack, Realtors, Kapaa (822-9891). They are located on the mauka side of Kuhio Hwy. in Kapaa. "YES WE CAN!" help you with any local real estate purchases—condominiums, residences or vacant land. Stop in for your free map and condo guide.

M. Miura Store, 4-1419 Kuhio Highway, Kapaa (822-4401). Experience fashion at Miura's, a family owned business in Kapaa for 72 years featuring Hawaiian and contemporary wear for the whole family. From beautiful muumuus to colorful swim trunks you will love the latest in fashion wear that they offer. Located across from the Kapaa Ball Park. Open 9-5:30 Mon.-Sat.

Rib 'n Tail, Kapaa Shopping Center (822-9832). Their fine lunches feature homemade soups, chef's salad, mahimahi, burgers, Swiss pork chops and several hot and cold gourmet sandwiches. Excellent dinners from \$7.95 include soup or outstanding salad, rice and hot garlic bread. One of their favorite dinner selections is "The Feast" which features broiled filet mignon, deep fried shrimp, chicken Valentino and complete meal extras. Lunch is served 11 a.m. to 2 p.m. weekdays, dinners daily from 5:30 p.m. Happy hour 11 a.m. to 5:30 p.m. (See special offer in ad.)

Sea Sage Diving Centers, Kapaa (822-3841). Kauai's only fully-equipped dive shops with 5-day N.A.S.D.S. certification courses. Or how about a gentle introduction to scuba for the highlight of your vacation? Unique individualized instruction makes it safe and fun for visitors of any age. No experience? THEY HAVE IT!

Title Slides, located at several stores on Kauai. This new product offers not just another scenic slide, but "titles" of various scenic areas around Kauai. The "titles" are designed to enhance and brighten any photographer's slide collection. Sample slides and mail order catalogs are available. Refer to their ad on this page for further details on brightening your slide collection.

Trade Wind Tees, 4-1378 Kuhio Hwy., Kapaa (822-3955). This exciting T-shirt boutique, located in the heart of Kapaa, has a great variety of designs to choose from, including creations by local artists who have hand-painted, silk-screened or air-brushed the designs. They offer T-shirts and shorts for the whole family, along with tank tops, golf shirts, tube tops and halter tops.

The
BULL SHED
Restaurant
Waipouli

The Local Choice

- Go where the locals go
- outstanding beef and succulent prime rib
- fresh fish, lobster, crab, scallops
- any combination of Steak 'n Seafood

822-3791

Brighten your Personal Travel Slide Collection with **COLORFUL**

TITLE SLIDES

of Local Scenic Areas! at your favorite store.... or send \$1.00 (check or money order) for Sample Slide... Brochure and Order Catalog to:

RANDA STUDIOS
2234 N.E. BUIAL CT. • PORTLAND, OREGON 97222

TRADE WIND TEES

OPEN DAILY 9:30 - 5

EXCLUSIVE AIRBRUSHED & SILK SCREENED T-SHIRTS Show this ad for a 10% discount.

Offer expires January 15, 1982 822-3955

The
FARMERS MARKET
in the heart of Kapaa
Open 9-5 Mon.-Sat.

The
ASIAN KITCHEN
Open 11-3 Mon.-Sat.

The Farmers Market at Kong Lung on the light-house road in Kilauea.
Daily 8:30 a.m.-7 p.m.

KAUAI DRIVE GUIDE

OCT.-DEC. 1981, VOLUME 6, NO. 2

THE GARDEN ISLAND



Kauai is nicknamed the "Garden Island" for its lush vegetation, fed by the rains from Mount Waialeale (the wettest spot on earth) and the many rivers that flow from its slopes. This tranquil scene is on the back roads of Lihue.

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*Kauai captured
On the Wings of the Butterfly*

**Papillon
Helicopters**

(808) 826-6591
Princeville Airport
P. O. Box 608
Hanalei, Hawaii 96714

Wherever you are, we are.

No matter where you are on the Garden Isle, McDonald's® is easy to reach. And easy on your wallet. Look for our Golden Arches on the maps in this publication and come on in for a hot and tasty breakfast, lunch or dinner.

*You deserve
a break today.*



McDonald's of Lihue
3113 Kuhio Highway
Lihue, Kauai 96766

McDonald's at
Waipouli Town Center
4-0771 Kuhio Highway
Kapaa, Kauai 96746

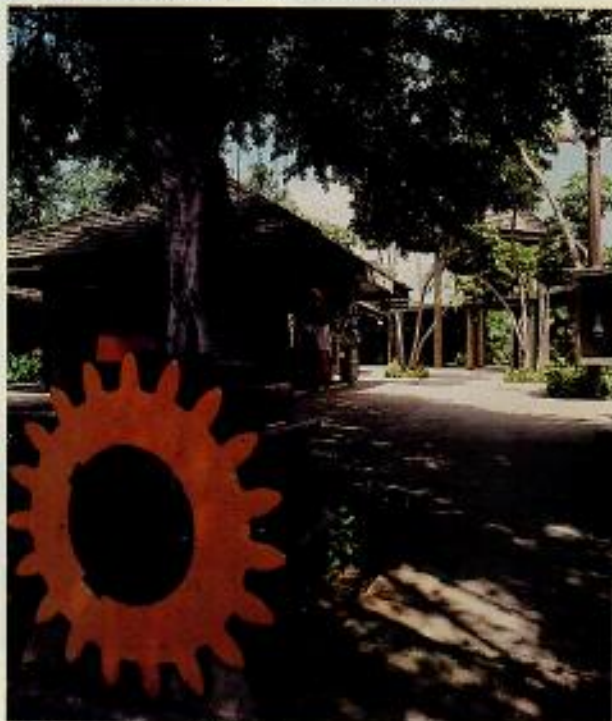
© 1981 McDonald's Corporation.

Kauai Starts At The Market Place

At Coconut Plantation



SEE PAGES 24-27



With over 60 exciting shops, two cinemas, restaurants and merchants, you'll find everything from sandals to suntan oil. Kauai's best selection of Island gifts, shell jewelry, aloha wear, art and things by Island craftsmen. Beauty shop, travel and activities center. Plenty of parking, so drive or take the Aloha Bus.

Free Photo-Hula Show

Bring your camera and capture on film colorful dancers from throughout the Pacific every Thursday, Friday & Saturday afternoon at 4 p.m.—it's free.



**OPEN Mon-Sat 9 a.m.-9 p.m.
Sun & Holidays 9 a.m. - 5 p.m.**



The Market Place At Coconut Plantation



Market Place Associates

Island of KAUAI



MAP 4
Page 37

NA PALI COAST
NA PALI WILDERNESS AREA

Na Pali Coast State Park

Kokee State Park

Polihaie State Park

BARKING SANDS

Pacific Missile Range Facilities

DRIVE AT YOUR OWN RISK

POU KA PELE ENV. 3,007'

WAIMEA CANYON PARK LOOKOUT

Waimea Canyon State Park

Waiokepa Bay

Kokole Pt.

KEKAHA BEACH PARK

Gomena Pt.

Kekaha

CAPT. COOK LANDED 1779 OLD RUSSIAN FORT

Waimea Bay

Pakala

Kaunakani

IMPORTANT PHONE NUMBERS

- Police 245-6721
- Fire 245-2222
- Ambulance 245-3668
- Hawaiian Airlines 245-3671
- Aloha Airlines 245-3691

MAP 3
Page 35

Prevent Thefts!

Remove all valuables and lock your car whenever you leave it. If you must leave other items in your car, lock them in the trunk.

Unpaved Roads Prohibited & Driven At Your Risk & Expense

Layer after —and then

By JAN TenBRUGGENCATE

Advertiser Kauai Bureau

MAHAULEPU, Kauai — The ocean inexorably lays on layer after layer of sand after it bared a remarkable field of petroglyphs on this south Kauai coastline two weeks ago.

Sand was pulled from the beach between Kamala Point and Puuleoleo during the big storm, fully uncovering the field for what old-timers say may be the first time in 50 years.

But after being open for a couple of days, the sand started to return. One of three etched slabs of sandstone was covered at midweek last week, and sand levels were moving up on two others.

Archaeologists who have viewed the site say it was previously unrecorded. Many of the figures that have been dug into the hard sandstone surface appear to be prehistoric, and some others clearly were made after the time of Capt. James Cook, agree archaeologists William Kikuchi of Kauai Community College and Francis Ching, of the Archaeological Research Center Hawaii.

The petroglyphs show Hawaiian figures of humans and animals, depictions of Polynesian crab's-claw sails and some geometric shapes. Too, there are several words in Hawaiian that clearly date since European influence in the Islands, as Hawaiians had no written language.

A group of young Kauai men have attached religious significance to the site and feel it may date back to a Spanish galleon's visit hundreds of years before Cook. Ed Kaiwi, one of the group, said he hopes to be able to find evidence of such a visit.

Kaiwi said he interprets one of the petroglyphs as showing a Spanish ship, and he attaches biblical significance to a number of others. Many of his interpretations are at odds with those of the archaeologists.

For example, what Kaiwi saw as a spaceship, Ching said is a traditional wickerwork fishtrap design.

Kaiwi and several others have been camping at the beach near the petroglyphs, a situation that has caused some concern to the state, whose beach the group had built a stone wall on, and landowners, whose property is crossed to get to the site.

Kauai state land agent Sam Lee said the state expects the ocean to cover the petroglyphs. The stone wall has already been covered by sand. No action has been considered against the group, Lee said.

Both McBryde Sugar Co., which leases much of the land around the beach area and whose cane fields must be crossed to reach it, and Grove Farm Co., which owns most of the surrounding terrain, have taken a wait-and-see attitude.

Both said they are concerned about the trespassing problem, but want to avoid confrontations.

David W. Pratt, president of Grove Farm, and

layer of history bared hidden in petroglyphs



Water laps at petroglyph showing vessel with crab's-foot sail on Kauai shore. Petroglyphs, uncovered by storm two weeks ago, are beginning to disappear beneath returning sand.

Advertiser photo
by Jan TenBruggencate

Richard Cameron, manager of McBryde, said they hope the increasing sand cover on the petroglyphs will cause people to lose interest and stop trespassing at the site.

What about the future?

The archaeologists said they hope — when the situation calms down and people leave the area alone — to go back to map and photograph the field.

Ching said he believes the sand could temporarily be washed away with a salt-water pump. The scientists could then do their work, and finally let the ocean cover the site again.

One of the problems with a sandstone petro-

glyph site is that it will wear down much more quickly than the normal basalt petroglyph fields found in the Islands. The sand that has hidden the rock drawings has also protected them.

Ching said he would like to see a display of photographs and perhaps three-dimensional models of the petroglyphs installed in the nearby Koloa-Poipu area so people can see what's there without having the site opened to potential damage.

Ching said he expects to begin review tomorrow on a set of slides taken when the field was almost completely exposed. He did not say how long the analysis might take.

Dear Mr. G. Balazs.

Sept. 21, 1982

Waimanalo Hawaii

P.O. Box 286

96796

I am very sorry to delay to write your answers and questions about turtles. After 5 weeks from Alaska to Mexico shore lines and fishings areas a aquaculture businesses. I find myself very guilty of not writing to let you know our fishing conservation laws which is the poorest in the nation. I wrote many letters to our local papers and ~~our~~ while our fishing and game division did not pay attention to my pleas to make a better conservation laws. I tried to call you on the phone while I was in Honolulu during the labor day weekend, but I think I made a mistake on your name which is so close to the other party. Fail-how foolish it seems to be not knowing the right name.

Well I want to make it clear to you that I may not live long to let the public know about this turtle migration and habits and other things that I found out by

fishing problems about conservation.

I wish I can meet you and some of your friends about this turtle problems in Hawaii,

what I am going to give you and your friends I cannot put in records because it is shame to see what happened in Hawaii fishing industry but I can tell you and it is worth it to know better than what I am writing.

Now in the near future a new fishing is going to be launch in Honolulu and I will be invited to that occasion. I surely want to meet you in person and give you what this turtle business.

I hope you will not refuse my wish of not meeting you and your friends that I am about to release to you.

You are a true Friend,
of Conservation of Fisheries

Yoshi Masaki

Note

I have a heavy feeling that our commercial fishermen will be facing many problems in the near future. I am studying the book which I bought an Inventory of Life on Our Water Planet by Jacques Yves Cousteau and the staff of the Cousteau Society Advisory Members.

For prosperity through the wiser management of our global resources. This book was written in the belief that the common people of the world all of us can make wise decisions when given the right information. A Bill of Rights for the Future Generation.

This report is going to lay the blame over commercial fishing as we all know that civilization approaches wild life will disappear.

Please help this industry and look or find a fisherman who wants to hear me say about this industry.

It is urgent to start now not the last moment.

Thank you very much



Honolulu Advertiser

★★ Thursday, March 19, 1981 A-3

The prairie dog, on its way to Honolulu for tests.

Advertiser photo by Jan Tebbrowocate

Prairie dog captured

— a survivor on Kauai

By Jan TenBruggencate
Advertiser Kauai Bureau

LIHUE — A black-tailed prairie dog was captured yesterday near a colony of the animals that was thought to have been wiped out.

Wildlife officials said the prairie dog, a sexually mature but small male, didn't look very healthy and had a pelt that looked as if it had been clipped with scissors.

Several officials inspecting a grading site in the Pihaa on Kauai's north shore came across the prairie dog scampering along the old road at Koolau yesterday.

Neal Fujiwara, district conservationist with the Soil Conservation Service, said he and three others leaped out of their vehicle and chased the small animal.

Normally prairie dogs stay near their burrows and dart down into the holes at any sign of trouble.

But this one had no burrow around. He would run short distances and stop, and didn't go very fast, Fujiwara said.

"He looked like a rodent, and I expected him to be real quick but he wasn't," Fujiwara said.

One of the men tossed a stick that knocked the prairie dog over and apparently stunned it.

They brought it to the office of state wildlife biologist Tom Telfer, where it appeared frightened and emitted high-pitched barks.

Telfer had spotted members of the colony of prairie dogs before the state Department of Agriculture started eradication efforts. This one, he said, looked smaller and less healthy than the others he had seen.

Telfer said it was possible that the prairie dog had eaten some of the poisoned bait left for the colony, but hadn't had enough to kill it.

The trapped animal had a ragged coat. It might have been losing a coat of

fur and gaining a new one, but Telfer said it looked more as if some of the fur had been cut off — the way someone might cut off a dog's fur if it had chewing gum or some other substance on it.

In addition to the ragged fur, the prairie dog's tail was worn hairless in one area.

Telfer said it's possible that someone was keeping the creature as a pet and that some of the wear and tear on its pelt was due to rubbing against the sides of a cage.

The little warm-blooded animal was shipped to Honolulu yesterday to be inspected by state veterinarians for disease.

State officials have no idea how the first prairie dogs arrived on Kauai. They were spotted earlier this year in a pasture between Moloaa and Kilauea, just a short distance from where yesterday's specimen was caught.

The creatures, with the scientific name of *Cynomys ludovicianus*, are native to a section of the Mainland from Montana and the Dakotas south to Arizona and west Texas.

They are of concern to ranchers because their burrows make pastures dangerous for cattle. They also are of concern to farmers because they eat grasses and related plants — and this would make them a potential danger to Hawaii's sugar cane.

The average black-tailed prairie dog is a little smaller than a cat, with a body about 1 foot long and a 4-inch tail. It weighs 2 to 3 pounds.

Telfer said he couldn't tell whether the captured prairie dog was actually smaller than normal or if the condition of its coat caused it to look that way.

After the state began its efforts to control the colony, interest in the prairie dog infestation died down. The new evidence is expected to renew measures to make sure they're wiped out.



KAUAI COMMUNITY COLLEGE

University of Hawaii

May 27 1981

George H. Balazs
Hawaii Institute of Marine Biology
University of Hawaii - Manoa
P.O. Box 1346
Coconut Island
Kaneohe, HI 96744

Dear Dr. Balazs:

Much thanks for your letter of 20 May 1981. I'm glad to see that some of our readers actually read our AOK newsletter.

I don't know much of Honu Point. I will ask people about turtles and where they may be found. There is a tendency to name natural features after turtles. A small-short jutting strip of land in Maha'ulepū Valley is called Ka-lae-o-ka-honu. A temple or shrine once stood there. This point is nearly a mile inland from the beach.

The only locality I have actually seen turtles was on the Napali Coast in the embayment of Nualolo-kai. Several turtles shells - evidence of poaching - was seen and an old-timer fisherman told me that the sandy beach was - is? popular with egg-laying turtles.

Well, I shall ask about Honu Point. Mahalo for your letter

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William K. Kikuchi
William K. Kikuchi



KAUAI COMMUNITY COLLEGE

University of Hawaii

April 13, 1982

George H. Balazs:

Aloha:

Much thanks for your letter of 6 April 1982. I really appreciate the two post cards of turtles, thank you.

In response to Mr. Alike Cooper's remarks about the use of turtles in fishponds - I have not heard or read anything like he mentions. He may be correct, I have no way of knowing at this time. I do think that turtles were kept in ponds only when they were caught and in numbers that could not justify their being eaten all at once. I do believe the word "occasional" is closer than "often" in reference to turtles being kept in ponds.

It is amazing that no Hawaiian scholar has mentioned the purposeful use of turtles in ponds, therefore, my assumption is that the keeping turtles in ponds was an occasional thing. I have seen turtles in the Kona ponds in the late 60's and believe that they were kept to keep them alive until needed. One fisherman informant mentioned that he did just that. I will go and ask fishermen here exactly what they did with turtles. May ~~be~~ make for an interesting article.

Well, I hope I have been of some help. Please feel free to write me.

Sincerely yours

Wilson Kihuchi

AN EQUAL OPPORTUNITY EMPLOYER

RR-1, Box 216, Lihue, Hawaii 96766 / Telephone 245-8311
3-1901 KAUMUALII HIGHWAY



KAUAI COMMUNITY COLLEGE

University of Hawaii

Jan. 24, 1980

George Balazs
Univ. of Hawaii at Manoa
Hawaii Institute of Marine Biology
P.O. Box 1346
Coconut Island
Kaneohe, HI 96744

Dear Mr. Balazs

Thank you for your letter of 16 Jan 1980. I'm sorry to say that I haven't seen the turtle motif at the Mahaulepu petroglyph site. When I go to the area, much of the forms were already covered by sand. Because of public and private interests, our group decided not to excavate and looked at only the exposed shelves of rock. In the future, when the public interest has died down, we will return to the site, excavate the sand, and ^{record in} detail the petroglyphs there. I'm sorry that I could give you more information.

Sincerely yours

William K. Kikuchi

William K. Kikuchi

KUA KAKO'O



Feb.

1983

CORAL ID CLASS . . .

Saturdays February 26 and March 5 are the dates for the coral identification class. It is being offered by the Marine Options Program of the University of Hawaii and will meet at the Koloa Neighborhood Center from 9 AM to 3 PM. A field trip is tentatively scheduled for March 5 in the afternoon, weather permitting. Call Pat Clark at: 337-9176 to reserve your space. Cost is \$3.00.

CHAMBER TRAINING SESSIONS

The Kauai Underwater Association is in hopes of gaining a few more volunteers to take its upcoming course in operating and maintaining the recompression chamber that is kept on this island. Dr. Robert Overlock will conduct a 36-hour training program for those who would like to learn a new and interesting life-saving technique as well as meeting others who are interested in diving and its allied activities. The course will probably be held on weekends. If interested, please call Mannette Bock as soon as possible at: 822-5879. At least 15 people are needed to begin the class.

FUNDIVE

You missed it if you weren't there for the Fun Dive on January 23. Fifteen lucky club members enjoyed a sun-filled day of diving on various locations in and around Hanamaulu Bay. The group greatly appreciates the use of Ron Evans and Bob Overlock's boats. Apologies to those who didn't get informed of the switch from Kukiula Harbor to Hanamaulu Bay.

KUA INSTALLATION DINNER

President Patty Grant assumed her new leadership role beginning February 3 at the annual KUA installation banquet. She will be assisted by: Ron Evans, Vice President, Gayle Saulibio, Secretary and Lindy Mann, treasurer. Supporting committees will be chaired by: Bridget Moury, Membership Chairman, Sandy Conrad, Conservation Committee and Del Dykes, Diving Safety.

Certificates for new recompression chamber operators were awarded by Bob Overlock, giving Patty an opportunity to stress the importance of the operation of the chamber to KUA and all other island divers.

Congratulations Patty and crew, we are looking forward to an active KUA year!

---NEW MEMBERS---

Welcome to KUA Mark Evans, Dan, Shirly and Wendi White, and Nancy Yuen.

NEXT MEETING:

Thursday, March 1, 7:00 PM at the Koloa Neighborhood Center.

P.S. Our new editor of KUA KAKO'O IS NEW MEMBER NANCY YUEN. MAHAHO FOR A JOB WELL DONE!





B I S H O P M U S E U M

1525 BERNICE STREET • P.O. BOX 19000-A • HONOLULU, HAWAII 96819 • (808) 847-3511

August 4, 1983

Mr. George Balazs
National Marine Fisheries Service
P.O. Box 3830
Honolulu, HI 96812

Dear George,

At long last I'm responding to your letter of May 26th; I had held off hoping that something would come of several inquiries I had made on your behalf, but as nothing has materialized I thought I'd better let you know. I haven't heard anything about turtles in fishponds since your correspondence with Bill Kikuchi back in 1976. Marion Kelly thought that the ubiquitous John Stokes might have uncovered something on this, and that a no-doubt painstaking search of his notes in the BM Library (particularly on the Pearl Harbor fish traps) might prove enlightening. Perhaps you may find time to undertake such a search one day. Marion also mentioned a gentleman by the name of Bill Madden, formerly of the Oceanic Institute (present whereabouts unknown) had knowledge of fishponds in the Hilo area. None of this is very helpful, I'm sorry to say.

I see that your affiliation has changed. I guess it's true that the only constant is change. In that regard I should mention that Alan Ziegler, whom you also wrote re turtles, has left the Museum; I told him I would answer for both of us, since he had nothing to add on the subject. We were sorry to see Alan go; he will be missed.

Over the past year I've visited every major Hawaiian island except Ni'ihau, including Kaho'olawe three times. It has been a great period for local travel. Don't know if I ever told you about my South Pacific trip in 1981; I visited ten countries collecting maps and government documents, and I'm still compiling the data.

If you're ever in the vicinity of the Museum, drop by and renew old acquaintances!

Aloha,

Lee S. Motteler
Geographer and Manager

LADY ANN CHARTERS

P. O. BOX 3422

LIHUE, KAUAI, HAWAII 96766

(808) 245-8538 OR 822-1135

REPLY

DATE _____

George Balazs

P.O. Box 3830

Honolulu, HI 96812

MESSAGE

DATE 11-10-83

Dear George,

Thank you for the beautiful map of sea turtles and the article you wrote. I've posted your flier on our bulletin board and will display the map as soon as I find a good spot for it.

Thanks for the forms also. I've enclosed one from yesterday and will start sending them although we're not up on the North Shore for the winter. It's good to see them down south too!

If we can be of further assistance, please call on us.

If you're on Kauai again, please call or drop by.

Aloha, Don + Ann

Aug 83

III. MISCELLANEOUS ACTIVITIES

1. Staff installed two informational signs at the newly established Pupukea Marine Life Conservation District, Oahu.
2. The U. S. Navy intends to remove anti-landing craft metal tripods located in shallow waters at the entrance of Pearl Harbor on Oahu. Staff biologists monitored aquatic resource values prior to and following the explosive test removal of two tripods.
3. Draft of proposed amendments to aquatic resource-related statutes with justifications and digests were submitted in preparation for the 1984 State Legislature session.
4. Draft U.S. Fish and Wildlife Service guidelines regarding hiring practices were reviewed as a recipient of federal aid funds.
5. Staff attended a tabletop Hazardous Spill Exercise sponsored by the City and County of Honolulu. The City is scheduling a field exercise for November.
6. A staff biologist gave a presentation on marine life conservation practices to a group of high school students being trained to conduct marine environment field trips.
7. Molokai Staff Activities: A presentation on aquatic resources identification was made to staff and volunteers with the Division of Conservation and Enforcement. The resident biologist responded to inquiries made by local fishermen concerning FAD buoys and their replacements. He also discussed local fishery concerns with Molokai's representative on the Maui County Aquatic Life and Wildlife Advisory Committee. A cursory aquatic resource assessment survey was conducted at Ilio Point (NW Molokai).
8. Kauai Staff Activities: The resident biologist installed and replaced trout fishing signs at Kokee. He also collected creel census information during the oopu (freshwater goby) fishing season and manned the trout check-in station during the opening weekend of the Kokee trout fishing season. A reported sea turtle nesting site was investigated and photographed at Lawai Kai Beach (S. Kauai).
9. Hawaii Staff Activities: The resident biologist, along with Department of Health personnel, investigated a fish kill in Hilo Bay resulting from a molasses spill. Three freshwater streams along the Hamakua coast were surveyed to identify the aquatic organisms within. Assistance was provided the deployment of fish aggregating devices (FADs) around Hawaii. The resident biologist also met with and responded to concerns of fishers on various fish and fishery related matters.
10. Maui Staff Activities: The resident biologist attended several meetings regarding jet-ski operations and their impact on the users of the Kaanapali (West Maui) coastline. He also responded to inquiries regarding new FAD placements around Maui.

2 Na Pali boat licenses studied

By Jan TenBruggencate
Advertiser-Kaui Bureau

LIHUE — The state Department of Land and Natural Resources hopes to bring legal competition to the business of transporting passengers by inflatable boat along the rugged Na Pali Coast.

The Board of Land and Natural Resources tomorrow will consider a proposal to license two tour operators to pick up and drop off people at three spots along the coast, most of which is under Division of State Parks control.

The two are Na Pali Coast Boat Charters and Na Pali Zodiac, the grandfather of inflatable operations in the area and the first to be issued a permit for legal operations there.

But that's not to say Na Pali Zodiac has been without competition. Maverick inflatable operators have been working the coast since the beginning. And while the land department would be granting special permits to the two firms, it still has not decided many of the questions surrounding the remaining mavericks.

For example, if a camper has a permit for a specific valley and a boat drops him for a fee just off shore, does that boat need a permit from the land department?

"This question has come up since this submittal (of the two boat firms). If they don't touch land? I don't have the answer," said the department's land management chief, James Deter.

There are also questions about operations that cross conservation land but don't actually collect money there or put their boats there. For instance, someone giving sailing lessons from a boat moored in Hanalei Bay if students pay at a booth in town. The students cross the conservation-designated beach area to engage in a commercial activity.

Is some kind of permit needed in that situation? Should it be from the land department or the transportation department, which controls navigable waters?

Deter said those kinds of questions are now being reviewed by the attorney general's office, the transportation department and the land department's planning and land management branches.

For those in clear violation, like boaters that pull up on Na Pali Coast State Park beaches with paying passengers, there's a solution, but it's seldom a sure thing.

"Within our abilities to enforce it, we will, but of course we can't cover the area 24 hours a day," Deter said.

The department plans to issue

Na Pali Coast Boat Charters and Na Pali Zodiac five-year leases to operate, with the costs to be determined by an independent appraisal. Each would be required to carry \$1 million in liability insurance and \$500,000 in property damage insurance.

Na Pali Coast Boat Charters would be allowed to make landings from May through September, when the waters are calmer, using no more than two boats and allowing rest stops to 90 minutes at a time at Nualolo Kai valley and camper dropoffs from 7 to 9 a.m. and 4 to 5 p.m. daily at Miloli.

Na Pali Zodiac would have similar permission for those valleys, and the two firms would never be allowed to have more than two boats in either bay at

one time. Nor would they be allowed to bring in more than 30 percent of the total number of campers allowed in Miloli at a time. Miloli is accessible only by air and water.

Na Pali Zodiac also would be allowed to make Kalalau drop-offs, something the other firm reportedly didn't request, only from 7 to 9 a.m. daily, and carrying no more than eight of the 80 campers allowed in the valley daily.

Both firms are proposed to be allowed to operate from Haena Point, near the county's Haena Beach Park. Area residents have indicated they don't like the idea of too much traffic there and are expected to protest the proposal at the land board meeting.



Advertiser photos by Jan TenBruggencate

Zodiac boats like the one above cruise the Na Pali coastline, offering spectacular views of lush, uninhabited valleys, below.



The Honolulu Advertiser

12/16/83

Post Office Box 8110 - Honolulu, Hawaii 96808

George -

Sure is unpleasant looking -
Thanks for sharing the pix -
The story should have appeared
by the time you get this. Was
Scheduled for Sunday 12/18.

Thanks again for your help +
season's greetings

— Jan Lee Beyer

Watching birds and sealife

Kilauea Refuge provides ringside seat

by Bill Blanchard

"Of any single area of the central Pacific Ocean, this is probably the best from which to observe both sea life and birdlife," stated Dan Moriarty, Ranger at the Kilauea Wildlife Refuge.

He pointed overhead to a Laysan Albatross, a graceful flyer with a seven foot wing span. Across the inlet of water nest 1500 Red-Footed Boobys. Later in the year an equal number of Wedgetailed Shearwaters

ranger shortly thereafter, and lives on the point with his wife Linda and their three children.

MORIARTY CAME TO Hawai'i in 1959 from North Hampton, Massachusetts and attended the University of Hawai'i, receiving a degree in Horticulture in 1964. He is attempting to landscape the point, some 33 acres in all, by replacing exotic plants with trees and plants indigenous to the area (naupaka, hala, ulei, pohinahina and ilima).

Moriarty has also set up the Kilauea Point Natural

North Shore Scene

by Bill Blanchard

the Hawaiian ecosystem.

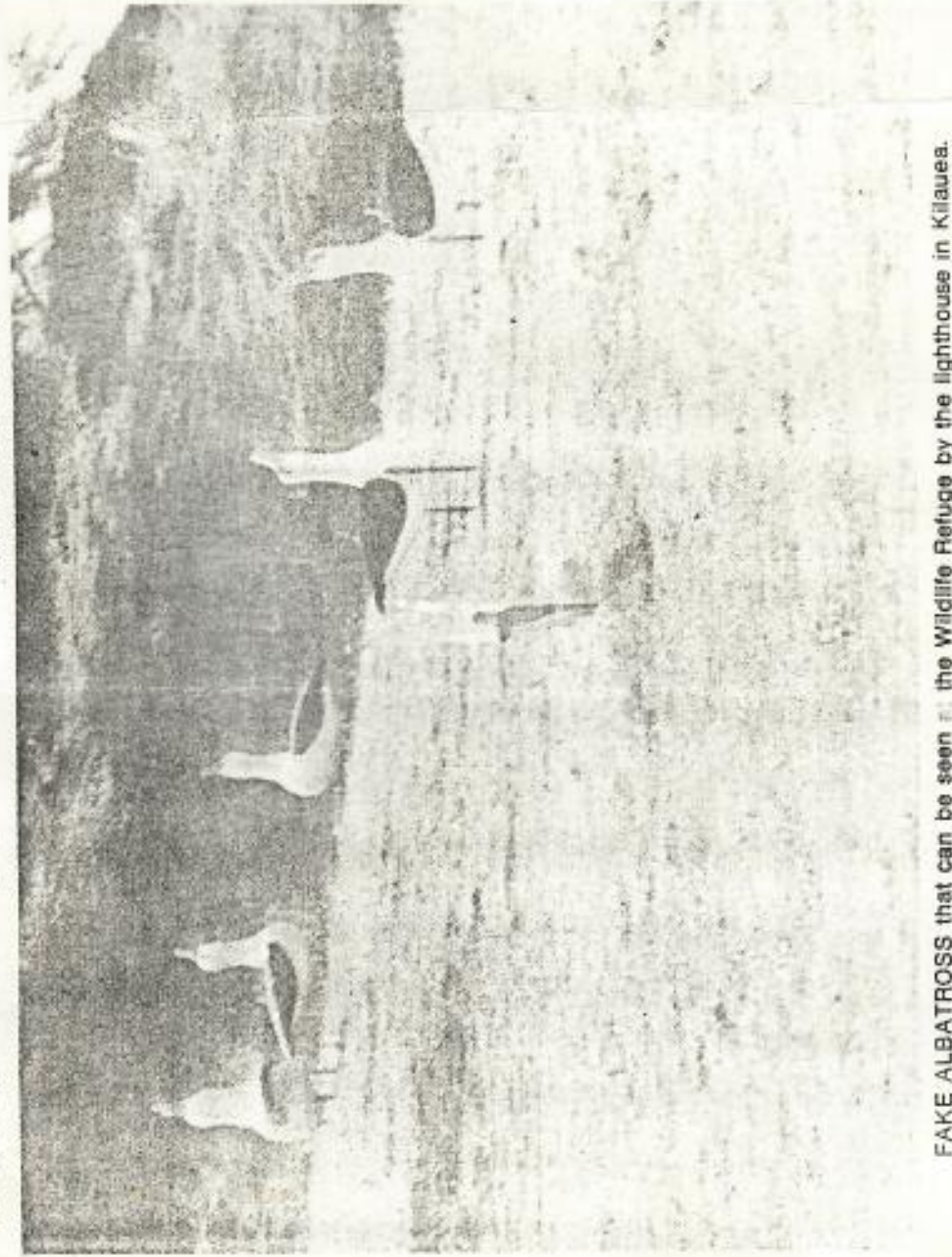
For those interested in joining the Association and becoming an important part of this interesting area they can join for an individual membership fee of \$5 or a family fee of \$10. There are also business and patron memberships available for higher fees. Call 828-1414 for more information.

THE VOLUNTEERS will take a 20-hour course which Moriarty teaches along with guest experts in Hawaiian island formation and wildlife.

Few realize the Hawaiian Islands stretch northwest of Kaua'i for several hundred miles. Kure Island the furthest north. These islands, except for Midway, are all part of the City and County of Honolulu. Midway is operated as a battleship and is part of the U.S. Navy. All islands, again except Midway, are used as sanctuaries for wildlife.

"This is one of the most photographed areas of Kaua'i," mentioned Moriarty as he gazed out at the beautiful point of land. Kaua'i's northernmost part.

"There are three features we emphasize," he went on to say. "The fantastic scenic views; the historical lighthouse; and one of the world's best viewing spots for watching the Central Pacific's wildlife."



FAKE ALBATROSS that can be seen at the Wildlife Refuge by the lighthouse in Kilauea.

will build their nests. As beautiful in flight, but not so numerous are the 40 odd White Tailed Tropic Bird, and its more colorful Redtail Tropic Bird of which there are about 39 who frequent the refuge. The Great



FAKE ALBATROSS that can be seen at the Wildlife Refuge by the lighthouse in Kilauea.

will build their nests. As beautiful in flight, but not so numerous are the 40 odd White Tailed Tropic Bird, and its more colorful Redtail Tropic Bird of which there are about 30 who frequent the refuge. The Great Frigate Bird, 'Iwa to Hawaiians, enjoy the area, their numbers fluctuating from as few as five to more than 50 at times.

IF THE VISITOR looks carefully down into the water at the bottom of the cliffs, he or she might see one of the large Pacific Green Sea Turtles which feed off the seaweed broken off the rocks by the action of the sea. "It's awfully hard to tag these turtles," claimed Moriarty. "If we tag the flipper it is suspected the noise it makes in the water attracts sharks. We have found turtles with great chunks bitten out of them."

Once in a while you'll see an Hawaiian Monk Seal, another favorite dish of the sharks. Although more humpback whales can be seen off of parts of Maui, Lighthouse Point is a good place to do whale watching. "Porpoises also frequent the coastal waters off the point," said Moriarty, "and can be seen frolicking and jumping in the water." They are correctly known as the Spinner Dolphin.

OF COURSE THERE are numerous imported birds which like to visit the refuge. The white Cattle Egrets which were brought to Kaua'i to eat the insects, attacked certain plants and animals. They are sort of falling down on their job, finding that catching and eating fat frogs and field mice is a more enjoyable menu. The Mynah birds were brought here from India to eat the caterpillars which were killing off grazing land, but here again they have multiplied and seem to enjoy sneaking into bird nests and eating the eggs. Another predator of the birds who seek safety in the refuge are owls, which drop in at night to feast on baby birds.

"THE WORST PREDATOR of all," stated Moriarty "is the dog. A few are wild, but most are just pets who find that attacking and killing Boobys and Albatrosses is fun, killing as many as 30 or 40 birds in one night."

The Booby and the Albatross have no fear of humans or dogs and are easy prey to them and to cats. If people in Kilauea would keep their dogs on leashes, the birds in the refuge would be better able to multiply. Of course people do their share of trampling over areas where eggs are laid in shallow tunnels.

The lighthouse on the point was constructed in 1913 before a road came to the area. The lighthouse then had to be supplied by cables attached to the cliffs which carried provisions from ships or boats anchoring just off shore. The Coast Guard took over operation of the lighthouse from the Lighthouse Service in 1930. The U.S. Fish and Wildlife Service shared the area with the Coast Guard for a couple of years then took over its control in 1978. Dan Moriarty became its



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ARCHAEOLOGY ON KAUA'I

KAUA'I COMMUNITY COLLEGE

RR 1, BOX 218

LINAE, HAWAII 96788

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OF

KAUA'I COMMUNITY COLLEGE

Editors: William K. Kikuchi
Delores L. Kikuchi

Byron Cleeland
Frances Frazier

* * * * *

A YANKEE IN PARADISE

CATHERINE MARY STAUDER

On 20 February 1980 Catherine Mary Stauder died of cancer in Fresno, California, at the young age of 65 years. Catherine was a devoted member of the Anthropology Club of Kaua'i Community College and an editor and regular contributor to this newsletter. Her role as one of the founding members of the Club, as participant in practically all of its activities and as researcher on things related to Kaua'i will forever endear her to those of us who knew her. In her memory, we, the members of the KCC Anthropology Club, would like to pay tribute to Catherine through this short article.

Catherine Stauder was a "David," searching for and slaying the "Goliaths" of hearsay, untruths, lies and myths. Her weapons were her inquisitive, patient, dedicated mind, and a sharp pen. Catherine was frequently criticized as being an upstart, a mere clerk without proper credentials, an amateur scholar. Being a Yankee by birth, her drive, perseverance and stubbornness helped to crumble the walls of ignorance. For her efforts Catherine was acclaimed by many in our learned community as a true scholar. The Bernice P. Bishop Museum and Archaeological Research Center, Hawai'i, Inc., both recognized her gifts and bestowed upon her the title of Research Associate. A lack of time complicated by increasingly troublesome medical problems curtailed and slowed Catherine's work. Still, she pursued her research until the very end. We, her colleagues, friends and confidants, salute Catherine Stauder, knowing that her dream to find and meet the original Source has been finally met. In the Valhalla of scholars and researchers, Catherine is very much at home.

For the first time in its history, the Anthropology Club had occasion to formally honor one of its members. This occurred at a special dinner/cocktail party at the Coco Palms Resort Hotel on Saturday, December 3, 1977. Catherine Mary Stauder was honored for her many hours and years of dedicated work to the Club. The party, a complete surprise for Catherine, was very well attended by more than 40 Club members and other friends. Special aloha goes to Mrs. Grace Guslander and Mr. Iida of Coco Palms for having arranged the cocktail party and the delightful dinner afterward. Coming from *O'ahu were Marion Kelly, Cynthia Timberlake and Lynn Davis from the Bishop Museum, and Agnes Conrad from the State Archives. A special plaque was designed by Pila and Dolly Kikuchi and Byron Cleeland; drawn and calligraphed by Glenn Katahara; and specially mounted by WaiHang Lai of Kaua'i Community College. The plaque, presented to Catherine, reads:

in honor of

Catherine Mary Stauder

associate editor
Archaeology on Kaua'i

research historian
Kaua'i Museum

research associate
Bernice P. Bishop Museum

Mutilator of Myths, Officious Oppressor of Oral History, Menace to Menehunes, Dauntless Debunker of Ditch Data, Heartless Haranger of Holoholoku, Fearless Fighter for Forts, Dynamo Digger and Relic Recorder, Rochester Runaway, Patron of Pueblos, Salacious Sipper of Scotch, Ice Cream Connoisseur, Hellion on Highways, Woeful Wig Wonger, Incurable Romantic, Kaua'i Kama'aina, and Champion of Truth, Justice and the American Way.

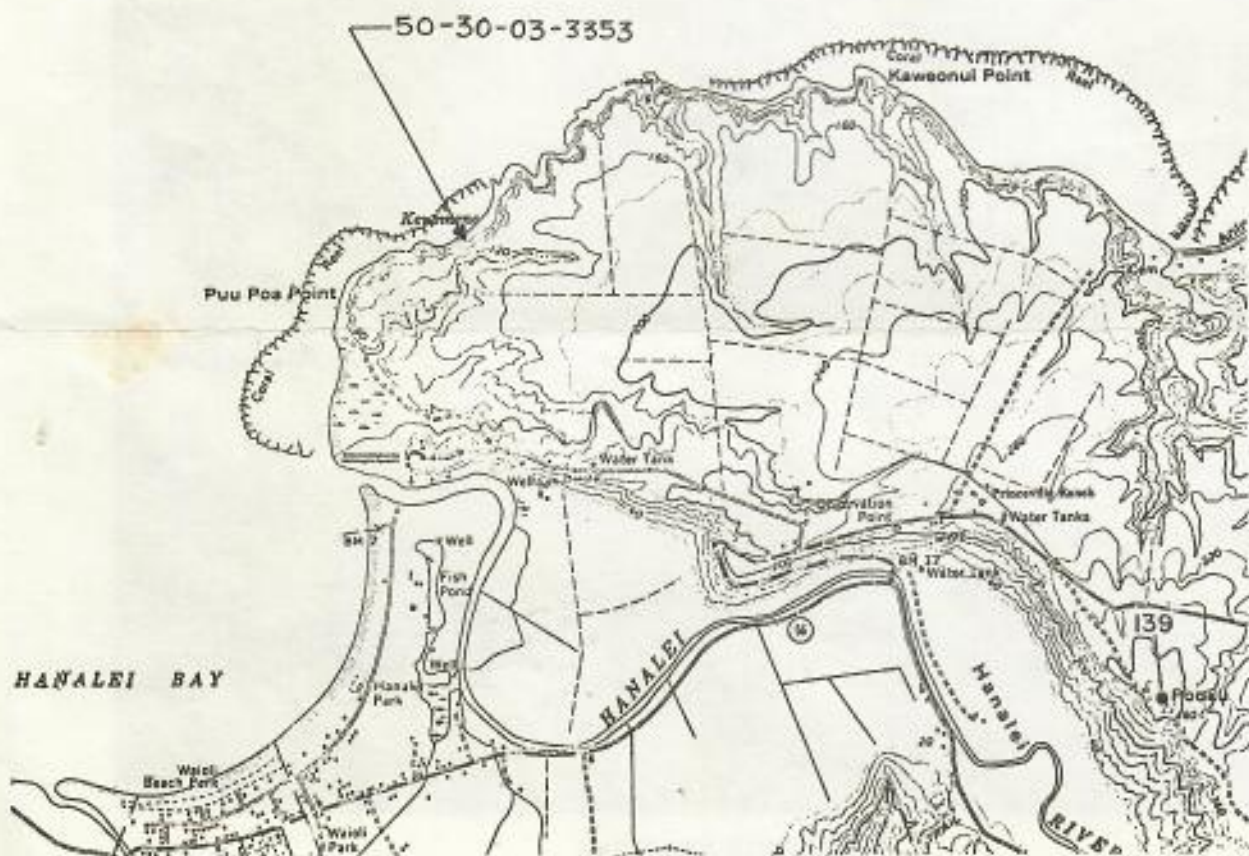
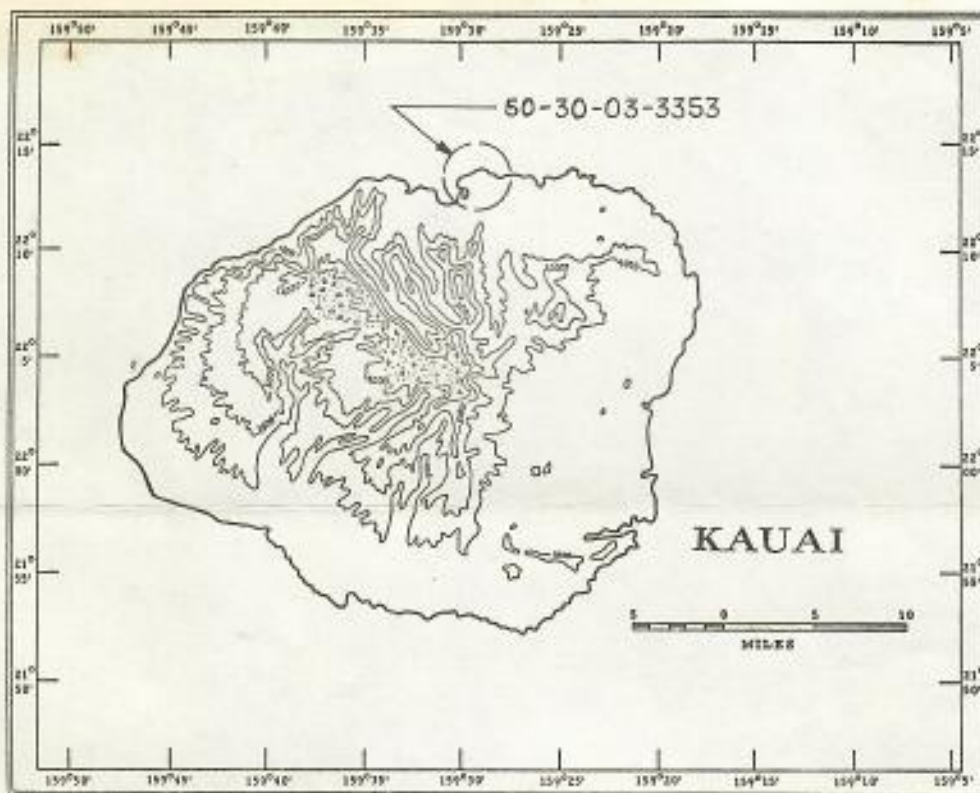
In gratitude for her years of devoted service to the Anthropology Club of Kaua'i Community College and looking forward to many more good times.

December 3, 1977



CATHERINE STAUDER
1915 - 1980

Map 1.
Island of Kauai



Map 2. Site Location

PETROGLYPH
50-30-03-3353
KENOMENE POINT, PRINCEVILLE, *HANAIEI, ISLAND OF KAUA'I

by

William K. Kikuchi

In the early part of 1979, Dr. Robert D. Nelson, M. D., a tourist staying at Princeville, came across a petroglyph on the beach. He called me, and over the phone I asked Dr. Nelson for photographs and details. These he sent to me from California. Having obtained permission to search the area below the Pali-Ke-Kua condominiums, a crew assembled on 4 July 1979 to visit the site. The group consisted of Byron Cleeland, Bill and Odetta NeSmith, Dawnelle NeSmith, and me.

A thorough search was conducted all along the shoreline, resulting in the discovery of a single petroglyph. This petroglyph is located on the beach (see Maps 1 and 2) on a sloping beachrock shelf (Latitude 22° 13' 40", Longitude 159° 29' 43", TMK 5-4-12). Its design is basically that of a human stick figure which measures 21 inches (53.34 cm.) tall and 9 inches (22.86 cm.) across the shoulders (Figs. 1 and 2). It is noteworthy that the figure seems to have been raised by pecking or carving away a surrounding "moat" which accentuates the petroglyph. There is only one other example known to me similar to this unusual carved human form. This is a stone plaque with a pecked, raised human form that was stolen from the Kaua'i Museum about two years ago. Much of the beachrock shelf containing the petroglyph is awash at high tide, leaving the figure exposed, i. e., without a protective sand cover. If the petroglyph were prehistoric, a greater amount of surface erosion would be expected than was observed. For this reason, plus the unusual workmanship, the relief carving is believed to be historic rather than prehistoric.

* Hawai'i place names which have been verified as being correct appear with an asterisk preceding them the first time they appear in each issue.

**Hawaiian terms spelling in accordance with recommendations of the 'Ahahui 'Olelo Hawai'i spelling project of 1978.



Fig 1. Petroglyph
on beachrock



Fig 2. Closeup of
figure.

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RAINBOW PETROGLYPH SITE

50-30-11-602, TMK 2-9-03-04

MAHĀ'ULEPŪ, KŌLOA DISTRICT, ISLAND OF KAUA'I

by

William K. Kikuchi

During the two severe cyclonic storms of January 7 to 11, 1980, high storm seas from the southwest battered the southern coast of Kaua'i*. The usually sandy beaches were stripped of their cover, revealing beachrock shelves and basalt outcrops. On Wednesday 9 January 1980, a beachrock shelf fronting the Gillin home at Mahā'ulepū * was uncovered, exposing numerous petroglyphs. Word spread quickly, and the community of Kaua'i flocked to see these monuments of the past. On Sunday, January 13, members of the Anthropology Club of Kaua'i Community College went to investigate the site. The crew consisted of the Kikuchi family, Susan Remoaldo, Ike Okamura, Jim and Roselle Bailey, and Jim and Lavine McFarland.

The site, termed the Rainbow petroglyphs, is located on Mahā'ulepū Beach directly fronting the Gillin home (Fig. 1). The Gillin home is the only structure along the entire coastline from Kipu-kai* to Makahu'ena * Point. The site is located at latitude 21° 53' 30" and longitude 159° 25' 09" and on the tax maps as TMK 2-9-03-04.

* Hawai'i place names which have been verified as being correct appear with an asterisk following them the first time they appear in each issue.

** Hawaiian terms spelling in accordance with recommendations of the 'Ahahui 'Olelo Hawai'i spelling project of 1978.

The Rainbow petroglyph site is not a newly discovered site. A few oldtimers" from Koloa* knew of part of the site but were not aware of its extent. The Gillin family knew that petroglyphs were found in front of their home, but, because of a desire for privacy, they did not publicize the information. Rumors of petroglyphs in the area were heard a year or two previous to their exposure. Plans by the Anthropology Club to resurvey the area in the summer of 1980 were made previous to the find.

There are several petroglyph sites in the Koloa area. These are at Keoneloa*, Maha'ulepu Valley, Makawehi * Point and now at Maha'ulepu Beach (see Fig. 1). Without knowing the details of the Rainbow petroglyphs, a comparison cannot be made at this time.

As far as we know, the Rainbow petroglyph site consists of 3 separate areas (A,B,C) all within a radius of 100 feet of one another. A rough sketch of the site (Fig. 2) imply that the site, although scattered, is to be considered a single petroglyph field. Area A is a shelf of fine-grained beachrock normally covered by three to four feet of sand; its dimensions are not known. Area B is another shelf of fine-grained beachrock normally covered by a foot or two of sand. Likewise, its extent is not known. Area C is an eroded, thick slab of beachrock which is approximately a foot higher than shelf B and of a greater angle. This is the area which has been occasionally exposed, and its surface indicates greater erosion due to its sporadic sand cover. These shelves and their associated petroglyphs show differential erosional wear in direct proportion to their exposure to the surf and to their physical location on the beachrock. The petroglyphs lying within the wash of the waves were more eroded than those normally covered by a thick layer of sand. Therefore, the excellent state of preservation of most of the petroglyphs was due to the thick layer of immobile but pervious sand cover.

No detail map of the site was made due to partial sand cover. A partial reconstruction of the motifs was made from photographs and slides taken by the author and by a granddaughter of the snior Gillin of Maha'ulepu (Fig. 3 a-h). The petroglyphs photographed show traditional Hawaiian motifs of pecked human forms that are linear, triangular and altered triangular in shape. Musculature is evident in some, especially in the legs. A paddler is shown with a paddle over his head. A single pecked geometric form the star, is unusual, as this motif is most probably historic in chronology. Not photographed but seen were two crab-claw sails, a chicken, a horse and two apron-like figures. Also seen was lettering, indicating historic use of this site.

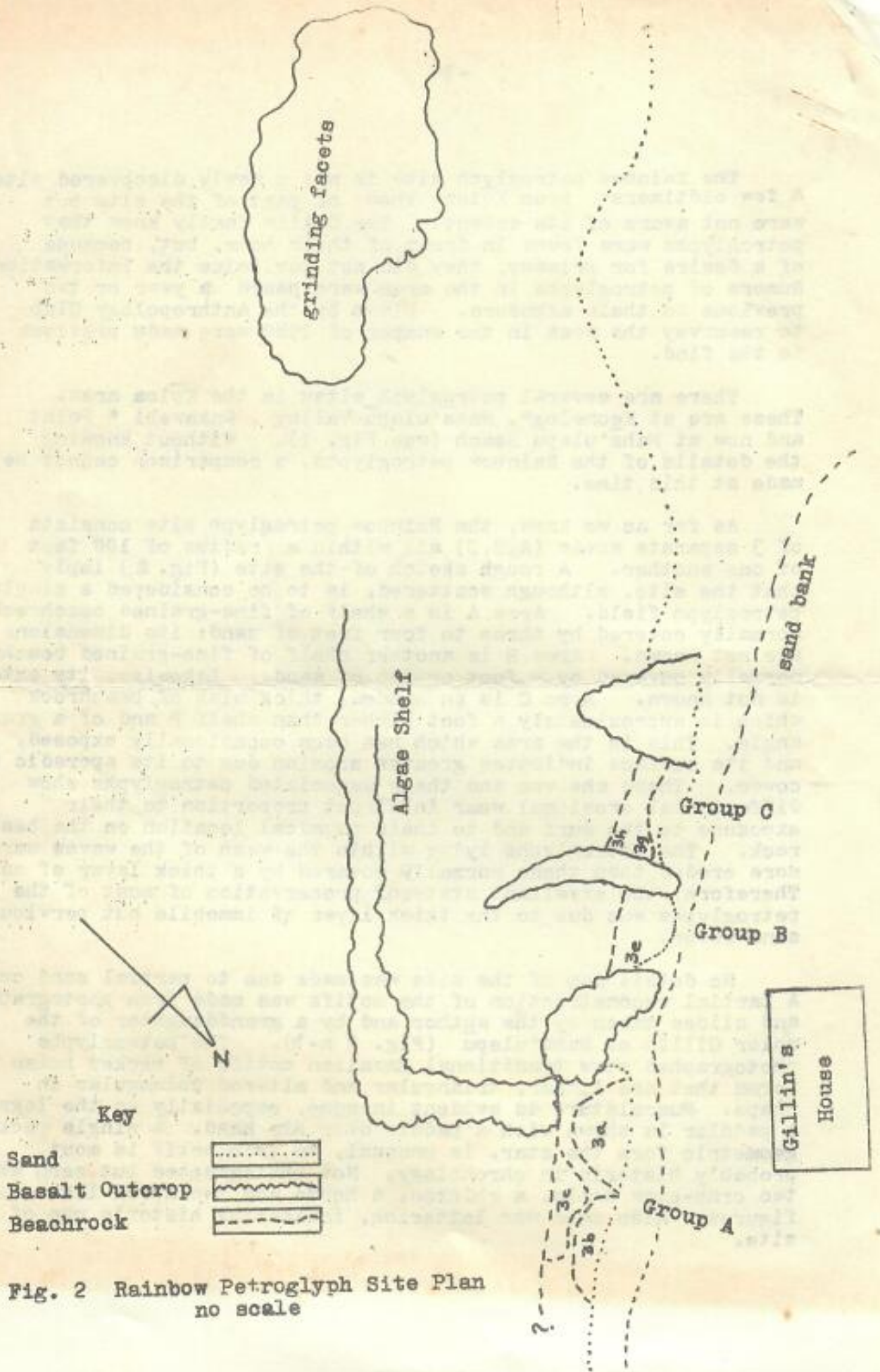


Fig. 2 Rainbow Petroglyph Site Plan
no scale

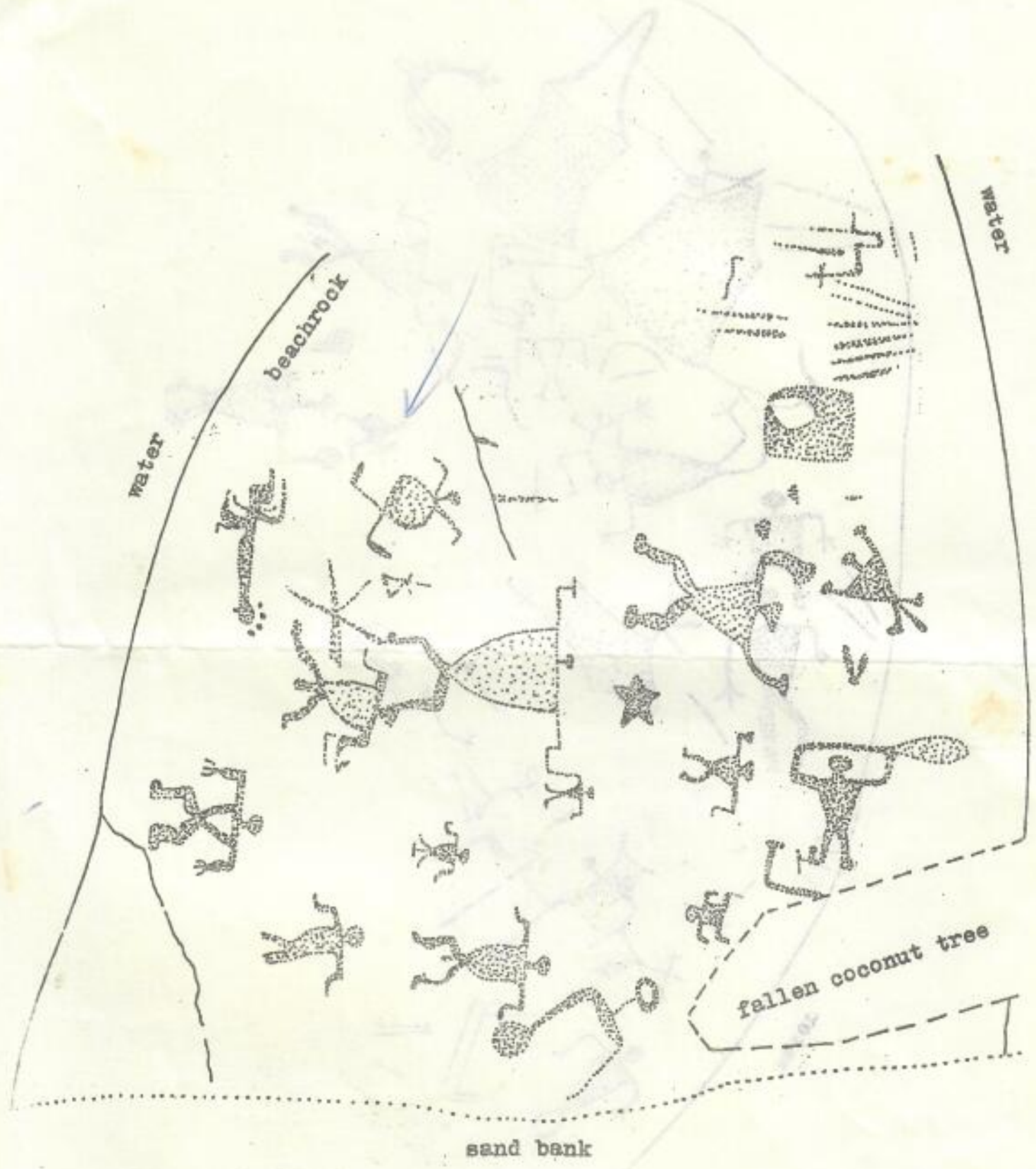


Fig. 3a Group A Petroglyphs
rough scale

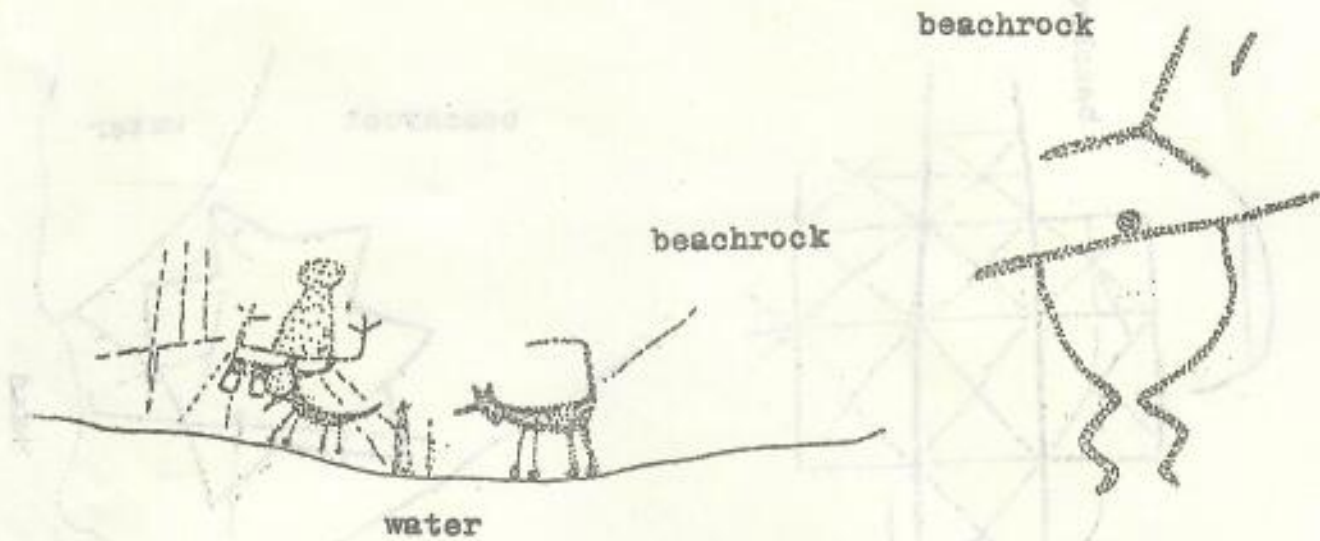


Fig. 3d Group A Petroglyphs
rough scale, exact location unknown

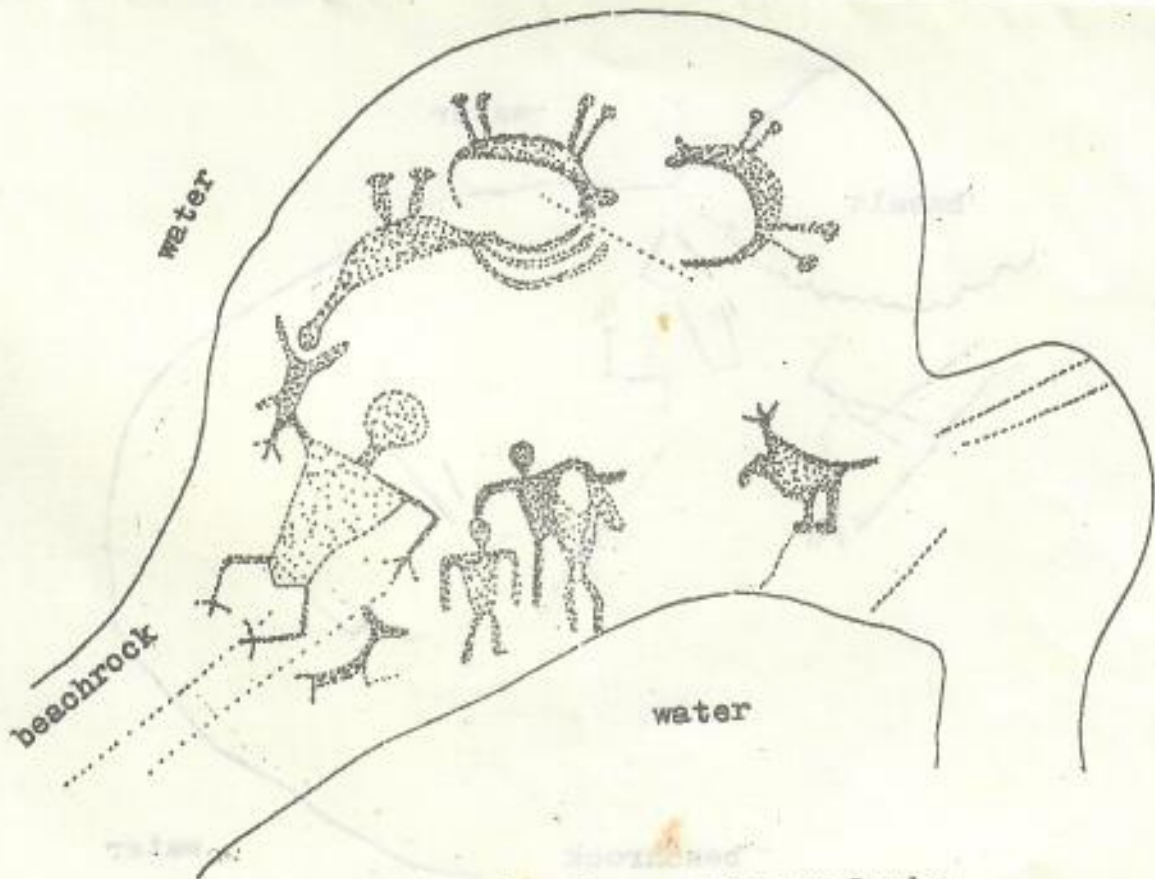


Fig. 3c Group A Petroglyphs
rough scale

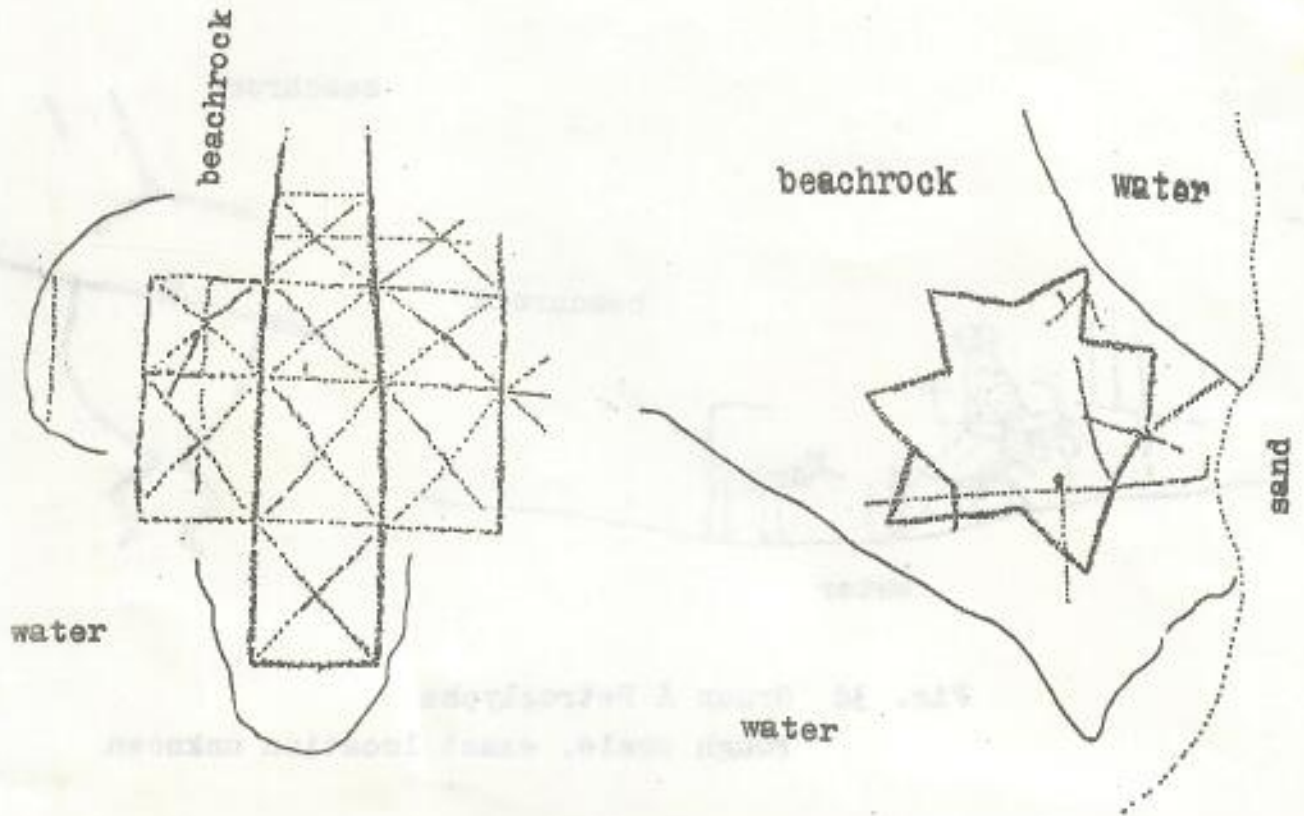


Fig. 3f Petroglyphs
rough scale, location unknown

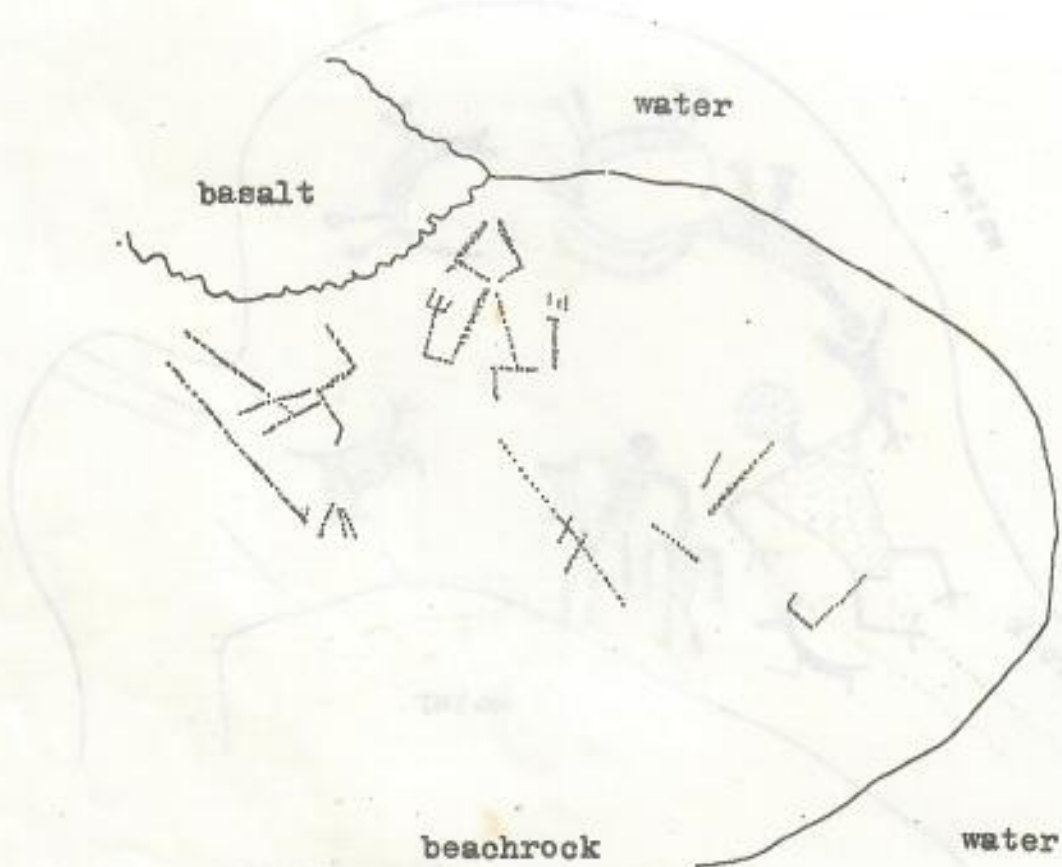


Fig. 3e Group B Petroglyphs
rough scale

SEA

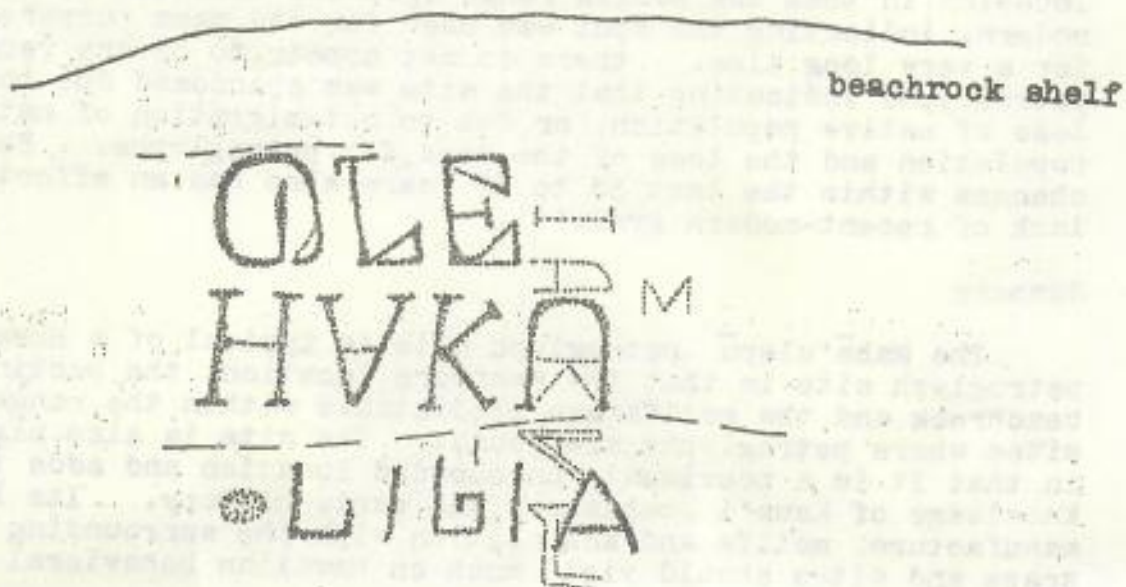


Fig. 3g Group C Petroglyphs
rough scale

SEA

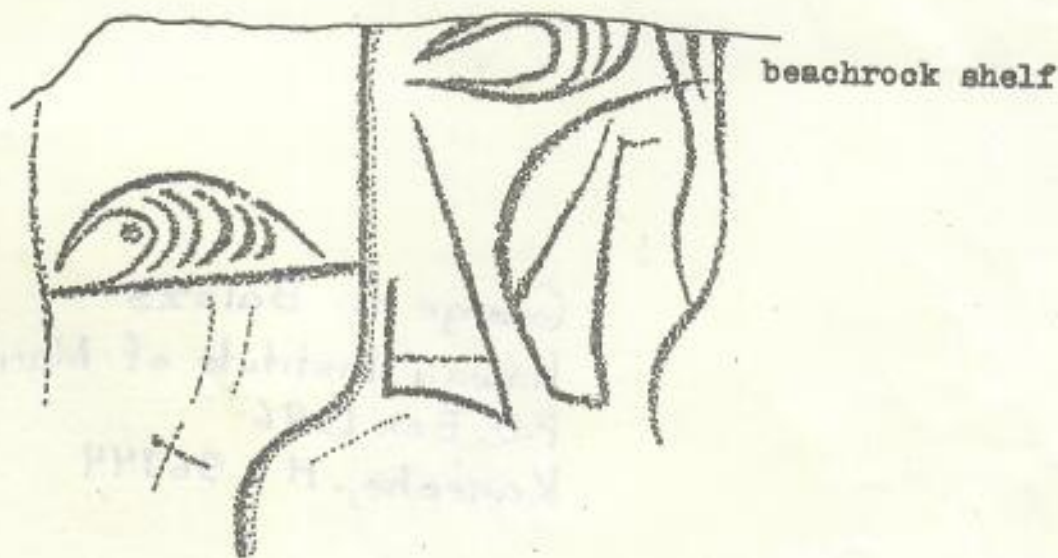


Fig. 3h Group C Petroglyphs
rough scale

The total site reflects a typical Hawaiian petroglyph location in that the motifs range from the traditional to the modern, indicating the spot was used for the same purposes for a very long time. There do not appear to be any recent petroglyphs indicating that the site was abandoned due to the loss of native population, or due to out-migration of native population and the loss of the need for petroglyphs. Beach changes within the last 50 to 80 years also had an effect on the lack of recent-modern graffiti.

Summary

The Mahā'ulepū petroglyph site is typical of a Hawaiian petroglyph site in that the seashore location, the pecking on beachrock and the motifs are predictable within the range of sites where petroglyphs are found. The site is also significant in that it is a previously unrecorded location and adds to the knowledge of Kaua'i prehistory and early history. Its location, manufacture, motifs and association with the surrounding landscape and sites should yield much on Hawaiian behavioral practices.

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George H. Balazs
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Page 8, Hawaii Marine, November 12, 1976



APPROXIMATELY 20 MINUTES FLYING TIME off the coast of Kauai is the island of Lehua. Atop the crater-like island is a

Frequency Shift Reflector Radar which is being disassembled by Marines and civilians. Thousands of birds watched as the

humans removed the only evidence of man from the crest of the rocky land mass.

November 12, 1976, Hawaii Marine, Page 7



Lehua Rock radar removed; tenant (a gooney) disturbed

Story By SSgt. G.T. Spear
Photos By Sgt. Ron Mallory

The last thing the gooney birds of Lehua Rock, off the coast of Kauai, expected to see November 4 was another bird give birth to six humans and then leave.

What the gooney birds didn't know was that the large green "bird" which landed on the narrow ledge of their non-vegetated island was actually a Marine CH-46 helicopter and its "new-born" were, in fact, two civilian technicians, two CH-46 crewmembers from Marine Medium Helicopter Squadron-262 and a reporter and photographer.

Amazed, the birds watched as the Marines and civilians dismantled a frequency shift reflector radar which, for years, sat on the upper ledge of the small island which was actually half of an extinct crater.

For crew members Sergeants Robert Goodwin and Don Thomas, and Dyna Electronics technicians Jim Miller and Robert Dzina, the impact of their presence upon the birds was hardly an issue. The most important matter to them was the dismantling of the obsolete radar and the transportation of it by helicopter to Kauai.

What one feathered resident didn't know was that the Marines were actually helping the Pacific Missile Range Facility at Barking Sands, Kauai by removing one of its unneeded radars, and by doing so, he would lose his home, lock, stock and radar.

It was no wonder, then, when Sgt. Goodwin moved a portion of the radar that he found the disgruntled tenant a bit disturbed.

Immediate relocation procedures were followed by Goodwin and the winged occupant was placed in another crevice farther down the hill and out of danger.

Thousands of inquisitive eyes watched the Marines and civilians as they disassembled the radar, piece by piece. The show was interrupted temporarily for the birds when a drenching rain pounded the crater and sent the web-footed spectators scurrying into their shelters. Still the humans worked on until the radar was ready for pick-up.

Bewildered, the gooney birds watched as the large bird again appeared and landed. Inside, the pilot, Captain Ron Eisel and co-pilot, Captain Warren North steadied the "bird" while crew chief, Corporal Kenneth Till and first mechanic, Corporal Josea Garcia assisted the ground crew with loading the radar. Once again the large green "bird" flew away but the humans still remained along with pieces of the radar. This was too much for two of the birds and their curiosity got the best of them.

Circling the group of humans, the birds decided to get closer and soared to within six feet of the intruders. A strong wind allowed the birds to maintain their hovering position, just out of reach of the resting men. Appearing undisturbed, the humans nonetheless kept a wary eye on their aloft spectators.

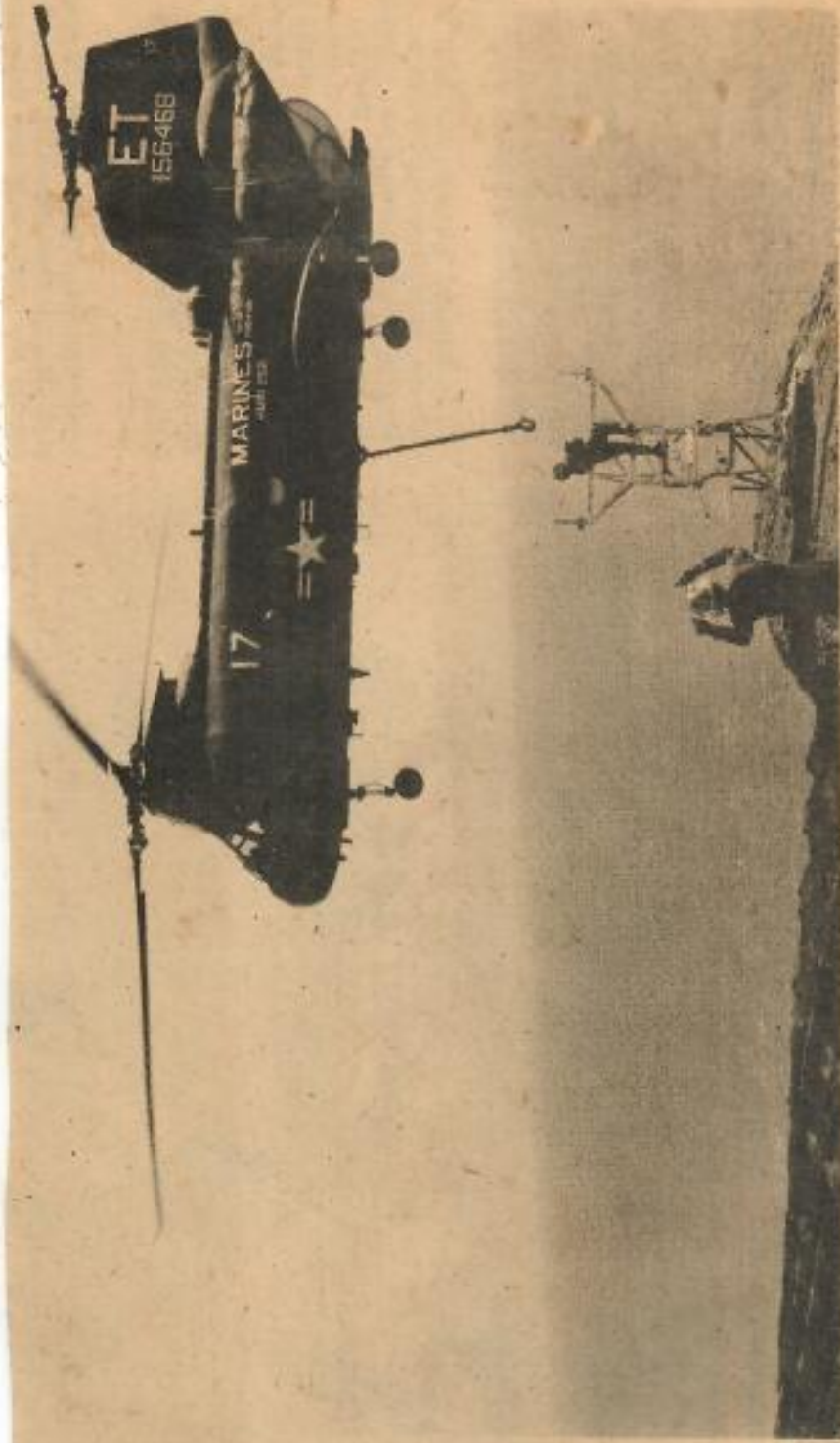
Moments later, the CH-46 returned, loaded the remaining gear and externally lifted the radars platform. Still the humans remained and the audience was now restless. Most were tired of the sight and returned to the security of their crevices.

Minutes later, the CH-46 returned for the humans and left. Relieved, the birds returned to their normal routine. An eyesore had been removed from the Hawaiian islands, the Range Facility had completed a long-awaited task, and the Marines of HMM-262 had gained useful experience. It all spelled common good . . . in any animal's language.



DOWN SHE COMES — Sergeant Robert Goodwin (top) of HMM-262 hands a reflector drum from a Frequency Shift Reflector Radar to Dyna Electronics technicians Jim Miller (left) and Robert Dzina. The dismantling procedure took place atop Lehua Rock, off the coast of Kauai during HMM-262's deployment to Barking Sands. The radar was obsolete and unneeded.

**TRANSPORTING THE
RADAR'S** base structure meant
lefting it externally from a CH-
46 helicopter as crewmembers
Sergeants Bob Goodwin and
Don Thomas assisted. The
movement of the radar to Kauai
by HMM-262 assisted the
Pacific Missile Range Facility in
accomplishing a long-overdue
task.



5361 KILAUEA AVE #18/84
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Dear Mr. Balazs,

3 prints
in album

Glad to be of some help with
my meager photos. Wish I could
have taken more. Keep the prints,
return the negatives at your leisure.

Being able to see the turtle
nest was a special experience for
me and my kids... a nice bit
of luck. Will be back on Kauai
visiting with Paul Arington again
in August and would love to see
the hatching if it's possible and if
luck smiles on us again. Could you
keep us posted? And thanks for the
information.

If I can be of any further help
please feel free to let me know.

Sincerely,

Nathan Wang

D

The Honolulu Advertiser

Friday, April 13, 1990

Rare animal life attracts crowds to Kilauea Point

Tiny staff struggles to keep up

Thanks to nearly a century of government protection, there are now more than 14 million birds of 18 species living in the Hawaiian and Pacific islands national wildlife refuges. One of the most spectacular of these refuges is on the lava cliffs of Kauai, where a visitor may spot a "gooney bird" or a humpback whale, a red-footed booby or a monk seal among the varied species of wildlife.

By Tad Bartimus

Associated Press

KILAUEA POINT, Kauai — Ranger Dan Moriarty's day was off to a typical start. There was an injured albatross in his bathtub and a dead sea turtle at his front door, both probably the victims of roving wild dogs or cats.

Moriarty is manager of the Kilauea Point National Wildlife Refuge in the northernmost inhabited part of the Hawaiian Islands.

Crowning the crest of Kauai's sheer lava cliffs, the refuge is dominated by a now-dark lighthouse listed on the National Register of Historic Places.



Moriarty



Advertiser graphic by Greg Taylor

mice. One of our biggest jobs is to make sure the fences surrounding this whole place are not breached or broken."

The grounded albatross in Moriarty's bathtub was probably attacked by a dog or cat that had managed to sneak beyond the wire barrier.

As for the sea turtle, which had been decapitated, Moriarty speculated it, too, fell victim to an alien predator.

"In the past 10 years all our populations are up, because of the fencing, but it's a never-ending battle," he says.



Advertiser photo by Jan TerBruggencalle

Kilauea Point was first a lighthouse and now is part of the Kilauea Point National Wildlife Refuge.

With its dramatic coastline, pounding surf, jagged precipices and jade-green rain forests, the refuge once attracted few visitors because it was so hard to reach. Now nearly 300,000 tourists a year come to visit.

They can train their binoculars on thousands of birds, including a few elusive aviators nicknamed "gooney birds," albatrosses that mysteriously have been coming all the way from Midway Island to nest since 1976.

If the ocean is not too rough, the visitors may also catch glimpses of Pacific green sea turtles, humpback whales that swim from Alaska to bear their young just offshore, endangered Hawaiian monk seals and spinner dolphins frolicking in the turquoise waves.

Moriarty also presides over two nearby refuges, neither open to the public, in Hanalei and Huleia.

With only two full-time employees, four part-time workers and a growing corps of volunteers, Moriarty must stretch his \$400,000 annual budget to groom, protect and enhance the three sanctuaries.

"This is a very busy refuge. We're running all the time, but it's such a beautiful place it stimulates you to try and do the right thing," says Moriarty, 49, who joined the Fish and Wildlife Service in 1976. In 1989 his efforts were recognized by the National Audubon Society with its annual Conservation Award.

He is also one of 20 individuals and five organizations across the nation named recently as winners in the Chevron Conservation Awards program.

Kilauea's original 31 acres were transferred from the Coast Guard to the Fish and Wildlife Service in 1976 when the old lighthouse was deactivated. For 63 years it had served as the main Hawaiian landfall light for ships passing from the Orient to the West Coast.

The refuge's acreage multiplied in 1988 when a land developer donated 91 acres and sold an additional 38 for \$1.6 million. The addition extended the refuge 1½ miles east along the coast to include the magnificent Crater Hill, home of a major red-footed booby rookery, and Mokolea Point. Moriarty and Kilauea community members were instrumental in the negotiations leading to the expansion of the refuge.

Today there are five wetland refuges on the main Hawaiian Islands and six remote island sanctuaries that stretch all the way to Midway, Baker Island to Rose Atoll in American Samoa.

Last year, at Kilauea, a new \$1 million environmental education center opened just a few hundred feet from the old lighthouse.

It offers a 180-degree view of Crater Hill and the nearby meadow where the Laysan albatrosses canter and tumble downhill until they gather speed for a graceful launch into flight above the roaring ocean.

The huge birds, which have a mature wingspan of 7 feet, are native to the northwestern Hawaiian archipelago but were rarely seen in the main Islands until they showed up near Kilauea in 1976.

Moriarty directed the restoration of native flora and the protection of wildlife on the refuge and adjacent waters.

Moriarty also founded the Kilauea Natural History Society, which publishes a quarterly newsletter devoted to the wildlife of Hawaii. The awards will be presented May 16 in Washington.

Thanks to nearly a century of protection, there are now more than 14 million birds of 18 species living in the Hawaiian and Pacific Islands national wildlife refuges.

Moriarty believes many birds stayed at Kilauea because the lighthouse keepers protected them and their habitat. Since 1913, when the lighthouse was built, dogs and cats have been banned from the area.

"The descendants of 50 generations of feral cats are out there just ready to destroy the only seabird colony left in the inhabited Hawaiian islands," Moriarty says. "Rats are also a very big problem here. The rats got into the sugar cane and ate it, and over the years they threw cats out into the

cane to control the rats and

Since then, very few chicks have survived because of predators or immature mating.

Last year on the refuge grounds there were 18 albatross nests, but only nine chicks hatched and all of them were killed by wild cats.

"This year, we had 46 eggs, but only 16 hatched," Moriarty said in late February.

"So far, cats have killed a few of those chicks, but we have trapped 21 cats including a very big tomcat we just caught, which we think was doing most of the damage, so hopefully we're gaining on it and some of this year's chicks will survive. We're down to about 12."

Moriarty, who earns about \$31,000 a year, now lives alone in the small stone house allotted to the chief ranger.

His wife and three children have moved to an apartment in Honolulu until the children graduate from high school.

To chase away the silence, Moriarty recently bought his first television set.

"But the stuff is awful," he says, "so most of the time I turn it off and just come back to the office to work."