

PUNALUU / KAU FILE
1970s-1990s G.H. BALAZS

10 policemen injured in five-hour rioting

LONDON (UPI) — Youths angered by the police shooting of a black woman rampaged yesterday through London's mostly black section of Brixton, hurling gasoline bombs, looting stores and battling with police in Britain's second riot in two weeks.

At least 36 people, 10 of them policemen, were injured and several reporters were attacked by gangs of youths during the five-

hour riot before calm was restored. Police said at least 45 people were arrested.

One policeman suffered a fractured skull when he was hit by a concrete block hurled from a window two stories up, but none of the other injuries were serious.

"It's hairy here," said a local resident who refused to give her name. "People are running around — it's like a war."

Owner to move grounded boat from Punalu'u Beach

A badly damaged 38-foot commercial fishing boat remained on the beach at Punalu'u last night, but plans have been made to move it to a warehouse in Pahala for repairs.

The "Lookout" ran onto a reef off the Ka'u beach Wednesday night. Two men from Kona who were aboard the vessel, owner-operator Alex Blackwell and crewman Scott Boydston, were uninjured in the mishap.

Early Thursday morning, the rising tide pulled the "Lookout" over the reef, where it sank, according to Ka'u resident Kiko Johnston-Kitazawa.

"The bottom of the boat was torn out," said Johnston-Kitazawa, by damage suffered when the vessel hit the reef and when it went up on shoreline rocks after going over the reef.

A Ka'u Agribusiness bulldozer dragged the boat ashore Thursday morning.

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HAWAII
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NEWSPAPER

Brewer transferring Hannemann to oversee its projects at Ka'u

C. Brewer & Co. Ltd., seeking to spur activity at its slow-developing holdings at Ka'u on the Big Island, is transferring Vice President Mufi Hannemann from Honolulu to Ka'u.

Compared with such areas as Kona, Kaanapali, Wailea, Princeville and Poipu, "Ka'u has been ignored, despite its beautiful ambiance, weather and mauka views," J.W.A. "Doc" Buyers, chairman and president of C. Brewer, said Friday.

"It's a sleeping treasure and we're trying to find useful ways for people to live and work there."

Last December, C. Brewer announced "Project 160" (named to mark the company's 160th anniversary) as a strategic plan for the next decade.

And all of the plan's three components focused on Ka'u, a district almost as large as Oahu, Molokai and Lanai combined but with a population of barely 4,000.

Also in December, the company announced that Hannemann was rejoining

pursue a congressional seat, winning in the primary but losing in the general election.

Project 160 drew the most attention for its proposal to create a rocket-launching spaceport south of Naalehu, with the company to provide up to 500 acres to any organization, public or private, willing to build it.

Plainly C. Brewer believed that Hannemann's political skills would be valuable in handling objections from residents that were sure to arise.

The program's other two strategies are:

- To continue development of Brewer's Punalu'u resort "with emphasis on fitness and health."

- To develop diversified agricultural lots at Sea-Mountain Farms.

In his new assignment, Hannemann also will hold operating responsibilities for the first time, overseeing resort activities at Punalu'u. Those include a golf course, tennis center, restaurant and conference center built for

the Aspen Institute for Humanistic Studies.

Reporting to Hannemann will be newly appointed resort manager Ken Ogi and golf pro Rip Collins.

After a press conference Friday, Buyers said Brewer's spaceport efforts will focus on the proposed facility's being an international launching center.

"There are today no international spaceports to my knowledge," he said.

Of the agricultural lot plan, Buyers said the concept calls for creating small farms of perhaps 10 acres each to be sold in fee simple.

Purchasers would be able to pick their crop — macadamia nuts, papayas, guavas, passion fruit, Hawaiian oranges, coffee, cocoa, cattle, ginger or whatever — and Brewer would arrange for start-up assistance and a means to market the crop.

"We want to make Ka'u a productive part of this state," he said.

Currently, Ka'u's biggest employer is Brewer's Ka'u Agribusiness Co.



Mufi Hannemann
Work on Project 160

the company as vice president for corporate development to assist in implementing Project 160.

He had resigned in July to



Sept - 26 - 75

Dear Mr. Balaz,

We thank very much for the picture of the 3 yr. old Hawkbill and the lime book. We do appreciate you sending them to us. Yes, the last of the eggs hatched on the 8th of Sept. It was not strong enough and still had its umbilical cord so we took it home & nursed it. Let it go the next day. Tally of the overall results are 143 live - 12 dead and 9 unhatched total 164 eggs.

I am enclosing you a copy of the Kaie News which has an article on the turtles and some pictures too.

This morning we found another turtle tracks on the beach. This time she was sort of either confused as to where she wanted to go or she might have been disturbed by someone or something because she had crossed the road, went along the fence line away then came back and made two unsuccessful diggings. One near the road and another close to

the light pole. She even went close to
the last nest site but changed her mind.
This might be the same or another turtle.
Anyway, we are hoping someday to be
able to actually see one with our own
eyes how a female turtle does her
thing when she comes to shore.

Arnold says that turtle has to come back
again to lay those eggs, so we are checking
and hoping that she would. Will let
you know if it does.

Mahalo + Aloha -

Mrs. + Mrs. Forward.

Say hi! to Linda for us.

Map??

Hawk
Sept 28 LAY

burial - seen
by resident - lay in fire pit -
moved - transferred

August 4, 1986

F/SWC2:GHB

Mr. and Mrs. Arnold L. Howard
P. O. Box 4
Pahala, Hawaii 96777

Dear Arnold and Jeanette,

Many thanks for your thoughtful letter of June 19th. I'm glad you liked the certificate. We really enjoyed hearing from you again and all about your vacation plans for Arnold's fishing expedition. You will have returned home by the time you read this letter, so I hope your trip was fun and safe.

I spent almost all of June tagging nesting turtles out at French Frigate Shoals. It didn't turn out to be a very good season, compared to the numbers present during each of the past 2 years. I'm afraid that far too many turtles are still getting eaten (by people and tiger sharks) before they grow big enough to breed. We know that quite a few juvenile turtles take up residency at special coastal places like Punaluu. But unfortunately not many of them seem to be making it to that critically important adult size. For example, I understand from our agency's enforcement branch that a half-grown turtle was captured in plain view at Punaluu on the afternoon of July 4th. Needless to say, they are pursuing an investigation based on eye-witness reports. I'm afraid, though, that this is only the tip of the iceberg!

One subject that I would like to hear from you about, when your time permits, is the latest plans for resort expansion at Punaluu by C. Brewer and Company. Some descriptive information has been enclosed, but undoubtedly you are very familiar with the proposed project. I would be greatly interested in any comments you may have on new problems this could create for turtles. Also, I was wondering what new reports you have heard about turtles nesting around Punaluu, either this year or last year.

Looking forward to seeing you again one of these days soon. Maybe I can talk Arnold into taking me out fishing.

Sincerely,

George H. Balazs
Zoologist

bc: Balazs
HL

M.O.P. Update

The Hawaiian Green Sea Turtle is on the endangered species list and has been protected by both state and federal law since 1978. How are the turtles doing? Is their population growing or continuing to decline? Answers to these questions and others including turtle feeding behavior, growth rates, and sex ratios are being answered by a group of UH-Hilo Marine Option Program students in a project funded by the Sea Grant College Program.

The students are being trained and directed by George Balazs, internationally recognized sea turtle expert with the National Marine Fisheries Service and The Hawaii Institute of Marine Biology.

Two different techniques are used for catching turtles in the study. In one, a team of specially trained student SCUBA divers search for turtles sleeping in caves or holes just offshore. The turtles are carefully wrestled to the surface, pushed into a rubber boat and briefly taken ashore for measurement and study. The second technique involves catching the turtles at night in special turtle nets. There have been numerous weekend SCUBA diving expeditions since the beginning of fall semester and netting expeditions in December, January, and February, with more planned for March, April and May. The following account of the most recent netting expedition catches the spirit of the students' experience.

M.O.P. Goes Turtling on the Big Island

By Nancy Bernard

The Turtle Project contingent of Hilo M.O.P. has just returned from a long weekend of tagging turtles at Punaluu, on the south side of the Big Island. Lucky for us (one again), we had beautiful weather. We keep hearing rumors about the cold strong winds that come tearing down off the slopes of Mauna Loa, but all we've seen so far are sunny clear days and calm, full moonlit nights. It's almost worth getting up to watch the turtle nets at 2:00 a.m. when you know there is a big beautiful full moon, swaying palm trees and a gently lapping sea. Of course, there is always the ever approaching reality that at any minute you might be forced to climb into soggy swim suits just to wrestle the 250 lb. turtle that is caught in the net.

But it's all good fun and very worth it, even after you look through the binoculars and spot the flippers flashing about in the moonlight. OH! OH! another turtle bites the net. So, you put down the binocs and turn to your buddy, "Should I wake up George or Chris this time?" knowing that George hasn't slept more than an hour all

night and Chris just got off watch at 3:00 a.m. Guiltily I run back to the pavillion and shake Chris awake, it's 3:30 a.m. "Hey, Chris, wake up, there's a BIG one in the net!" Chris looks at me in shock and disbelief. "You weren't supposed to check the net for another 10 minutes." Poor Chris, up again just so we can plunge into the icy cold water.

Meanwhile, back on the beach, the others are suiting up: two people to pull the turtle out of the net and one to hold the light. Chris comes back half asleep and the three of us swim out to the net, and to our surprise we discover a second turtle stuck in the net. Wow! that makes six turtles caught tonight. After forty-five minutes both turtles are on the beach lying on their backs next to the other caught turtles. There they rest for the duration of the night, all in a line like beach chairs on the French Riviera, waiting to be tagged, measured, and weighed.

Morning arrives. The breakfast crew prepares pancakes, fruit, cereal, coffee, and hot chocolate. One grinds! Hilo M.O.P. is really getting the gourmet food prep down to a science, no one starves at the Punaluu Pavillion Diner. Head chef Leon Hallacher really out-did himself this time: Tacos for dinner, sardin and sandwiches for lunch, and French toast for breakfast.

After breakfast, the half-awake group gathers on the beach to (as George puts it) "process" the turtles who are calmly sunbathing on their backs. The sun is already up and the turtles are starting to look kinda hot. Diane pours water on their bellies to cool them off, and picks off parasitic turtle barnacles. Every inch of their turtle bodies are measured, then they're tagged and weighed and finally blood samples are taken so that their sex can be determined. And then the moment we've all been waiting for: freedom! The turtles are turned over on their stomachs with their heads pointed towards the sparkling sea. On little flippers they charge to the water and fly through the surf, freedom at last.

Turtles work at night so the daylight hours are mostly spent sunning on lounge chairs and picnic tables or sleeping in steaming hot vans. We all rest waiting for the two-hour night shifts. Two days of turtling can really be exhausting but it's always challenging and it's always fun. As the end of the weekend approaches we all prepare to leave. The nets are taken out of the water and then the long process of untangling the knots begins. Six big turtles trapped in a net can really twist things up. After three hours of untangling and mending, the gear is packed up in various vans and cars and we're off! Another exciting weekend of turtling has come to an end. □

campus corner

Dr. Donald A. Wells, Emeritus Professor of Philosophy, College of Arts and Sciences, University of Hawaii at Hilo, has just published a new book, *War Crimes and Laws of War*, by the University Press of America. This is his second volume on the subject of war. His earlier book, *The War Myth*, was published by Bobbs-Merrill in 1967.



Professor Wells

The starting point for the present book is the war crimes trials held both at Nuremberg and Tokyo and later in "occupied" countries following World War II. These Trials prosecuted Germans and Japanese for three offenses: 1) war crimes, 2) crimes against humanity, and 3) crimes against the peace. The major arena for both war crimes and crimes against humanity were the extermination camps and the prisoner of war camps. The victims were either soldiers who had surrendered or civilians. The crimes against the peace were based on the premise that "aggressive war" was an offense.

The major argument of the Nuremberg prosecutors was that those who were charged had committed "excessive" slaughter, that the slaughter had not been militarily necessary, and that they had ignored the traditional combatant - non-combatant distinction. They appealed to the declarations of the Hague and Geneva Congresses, all of which had forbidden attacks on either prisoners of war or civilians. At the time of the Trials the Allies had disagreed over whether there existed adequate grounds for having the Trials at all. War, after all, was a sovereign right of nation states, so how could there be anything criminal about killing in wartime? The fact was that no German or Japanese was prosecuted for deeds committed against soldiers or civilians on the conventional battlefield. They could all be shot, stabbed, napalmed, gassed, poisoned, or bombed indiscriminately from the air. The only protections were for those imprisoned.



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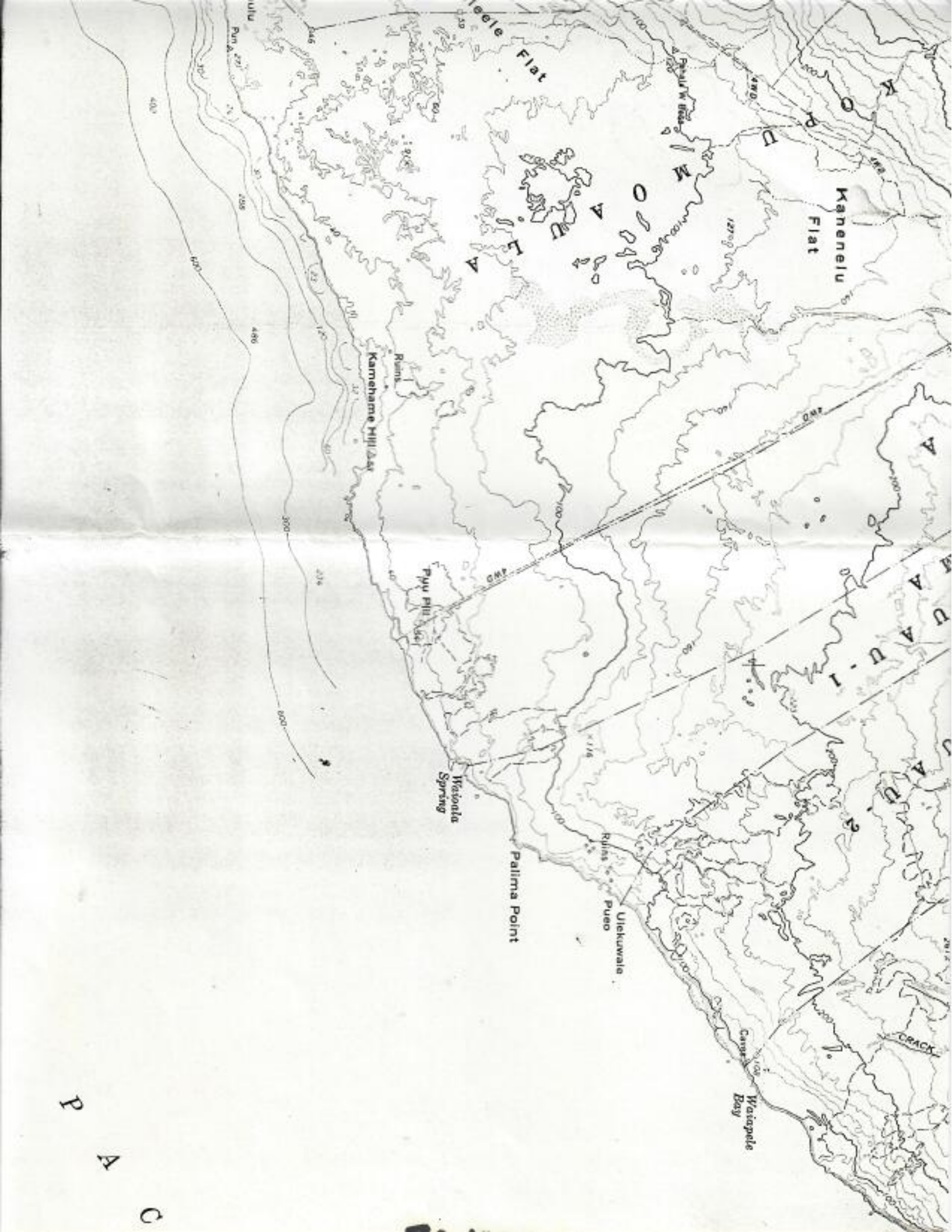
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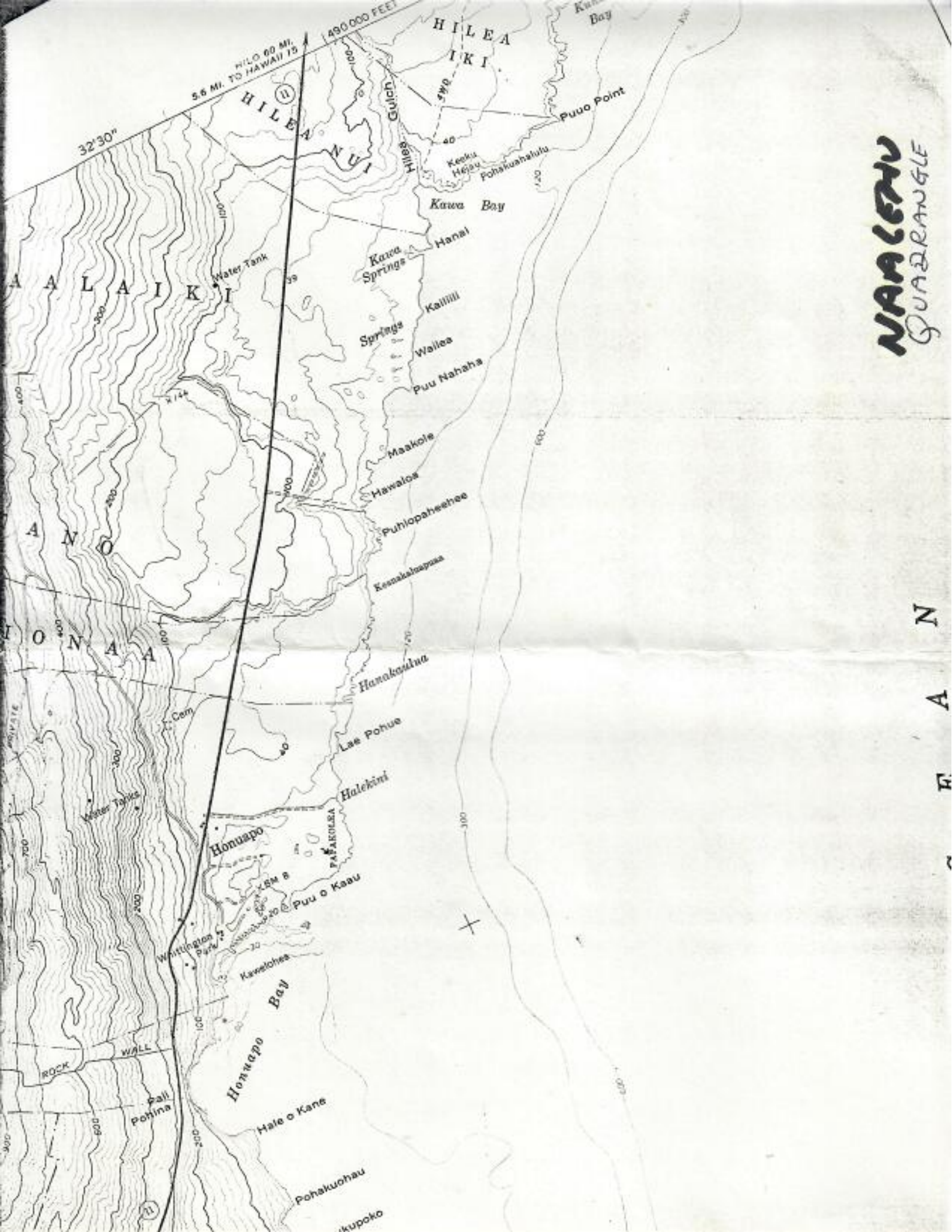
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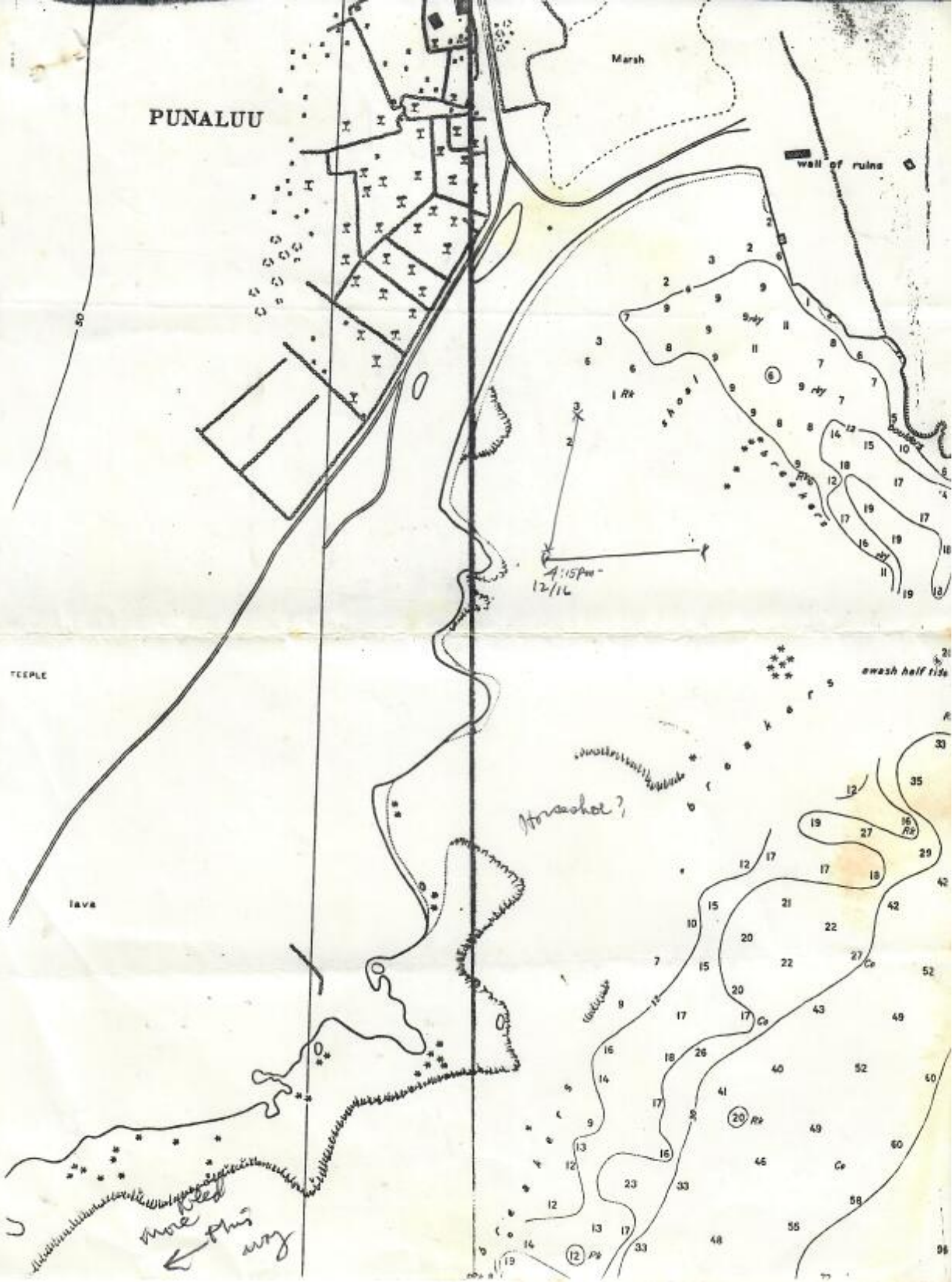
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Horseshoe?

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August 8, 1984

Dear George -

I hang my head in shame over my poor correspondence.
Re Kamehame;

You will need a 4 wheel drive vehicle to get down there. Permission has to be gotten from the plantation to go down and there is a key. If you give me at least a days notice I can arrange for the pass and key. I would like to go down with you but would have to check w/ my boss and it would depend on when you would be going down.

The word around here is that there are plenty of turtles along the shore like Kona side of Punaluu. I ~~took~~^{led} a hike July 4th from Honowaa to Punaluu and we watched 3 turtles feeding from the Rocky Heiau at Kawa.

Unfortunately I've been told that some of the locals are still catching turtle.

I hope this gets to you before your departure.

Aloha,

Bob

928-8042

DOTY

Wallace & Virginia

the daughter of the cannibal woman Kaikapu. Ninole was beautiful but cruel. While she and her mother lived by the pools, the people of Punalu'u were afraid to go there for water.

The spring on the east side of the Ninole ponds was named Kau-wale, meaning "Useless-landing." Here is why it was so named. Ninole the ogress used to go to the beach near this spring, where she could be seen by men passing in canoes. She would beckon to them and they would come ashore. She invited them to eat, and led them to the cave in which her mother lived. When they entered, the cave mouth would close. The men were trapped; some were eaten, some were tormented and starved.

PUNALU'U

Punalu'u is the name of a bay with a beach which, viewed from the sea, would perhaps have appealed more than any other along this coast to Polynesian migrants from the south as a place for a landing and first settlement. It is deep and sheltered enough to be shielded somewhat from the prevailing winds, and it has a beach on which fishing canoes can comfortably land in normal weather. Chester Lyman, in 1846 found it "romantically situated on the beach, shut in in part by a rough lava stream." This bay is also the best in Ka'u for sheltering beached canoes. Now it is mounded quite high, and thrust back; formerly it was more extensive. But still it has survived the tidal waves which have swept other beaches away completely.

Punalu'u means "Diving spring," and takes its name from the fact that for their drinking water the natives had to dive (*lu'u*) down in the bay to an underwater spring (*puna*) some ways out from the shore. A man would take gourds out to the place and dive under. When he came to the fresh cold water near the bottom of the bay, he would unstop his containers, fill them, then surface and bring them to shore. In ancient times the Punalu'u people went to the springs at Ninole for their drinking water until the ogress Kaikapu settled there. Then they learned to dive for water in the bay. Some 50 yards in from the beach is a pond that now is stagnant, but formerly it was large and had ample fresh water from a deep spring named Ka-wai-hu-o-kauila. In the old days the spring was *kapu* and used only for drinking purposes.

A legend relates that there was a time when stormy weather prevented the men from diving for water. There were two supernatural turtles who had come out of the ocean to Punalu'u: Honu-po'o-kea (Turtle-with-white-head), the mother; and Honu-'ea (Turtle-with-reddish-brown-shell), the father. The mother gave birth to an object resembling a piece of *kanila* wood, which she buried in the sand to be hatched out by the sun. Then they dug into the earth and made a spring, then returned to the sea. When it was time for her "egg" to hatch, Honu-po'o-kea returned. When the thing she had laid did hatch it was a turtle the color of polished *kanila* wood. Mother and

daughter lived in the spring until the baby turtle grew up. The young turtle was named Kauila. The spring came to be named "The-rising-water-of-Kauila." The turtle girl was able to assume human form and play with the young folk, but would become a turtle again when she went back into the spring. When bubbles came up in the spring, people knew the turtle girl was asleep in her home. Children used to catch fish and shrimps in the spring, and Kauila watched lest the little ones fall in. The people loved Kauila for this and because her spring gave them drinking water. They never used her water for any other purposes.

In and around the pond whose water came from the spring the folk of Punalu'u were able to grow good wet taro. This is the only place in Ka'u besides Waiohinu where *kalo wai* could be grown. There is a quaint legend about the flight of two taro plants from Kona to Punalu'u. Here is Kawena Pukui's version of the story, and her interpretation.

Big-Taro and Little-Taro grew in Kona, Hawaii, in a patch owned by a man named Laka.

One day, the sound of wood-chopping was heard and both knew that he was at Lani-pae, preparing fuel for his *imu*.

"Listen," said Big-Taro, "Laka is cutting wood and I know that he is planning to put us in the *imu*."

"Not I," declared Little-Taro, "for when I am uprooted, the smallness of my root will be noticed and I will be pushed into the earth again. But you are large and will not be spared."

"Let us flee before the *imu* is lighted," suggested Big-Taro, and so the two flew to Punalu'u, in Ka'u. There they settled down and took root again in a spot known as Kalo-nui-me-Kalo-iki (Big-Taro and Little-Taro) since that day.

This old tale has been mentioned as a "children's legend" by *Haole* writers of our old tales, but I feel that there is more to it than something to amuse little folks.

The old saying *Ke kalo kumu o ka 'aiua* ("The-taro-planted-on-the-land") was applied to the hereditary chief of the locality. He was responsible for the life and welfare of his people, hence the term.

Perhaps an invading chief (Laka) came to Kona and Big-Taro, the ruler, and Little-Taro, his personal *kohu* or attendant, were taken captives and subjugated. The victor became their chief and they his unwilling subjects. Whether they wanted to or not, they "grew in his patch."

Then the day came when certain activities on the part of Laka, the chief, warned them of their coming deaths as human sacrifices. Both "Taros," decided to escape (fly) to Ka'u. The escape was successful and the two settled, unmolested for the rest of their lives, in Punalu'u.

On the shore, not far from their new home, is a spot called Lani-pae (Chiefs' landing) and I guess that they escaped by canoe to this landing place.

The Lani-pae in Kona might have been Laka's landing place, and the one in Ka'u that of the two "Taros" who sought refuge there.

This is just my *unana'o* (opinion) on the subject. (Pukui notes.)

The area of the beach and the old lava flow that flanks Punalu'u is low and flat, and here many coconut trees flourish. This is, in fact, the only place

Native Planters in Old Hawaii
Their Life, Lore, and Environment

By CRAIG HILD HANDY and ELIZABETH GREEN HANDY

With the Collaboration of
MARY KAWENA PUKUI

BERNICE P. BISHOP MUSEUM BULLETIN



Bishop Museum Press, Honolulu, Hawaii
1972

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AM101
B442
no. 233
cbp. 2



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center
Honolulu Laboratory
P. O. Box 3830
Honolulu, Hawaii 96812

May 10, 1984

F/SWC2:GHB

Sergeant Gomes
County of Hawaii Police
Department
Kau District Station
P. O. Box 262
Naalehu, Hawaii 96772

Dear Sergeant Gomes:

At about 1 a.m. on April 13, 1984, we met at Punaluu Beach Park to discuss a beating sustained by a male University of Hawaii-Hilo (UH-Hilo) student and threats of sexual attack made against female students. These actions occurred during the late night of April 12 and involved five or six males who had been drinking heavily in the parking lot since sunset. No formal charges were made because the students declined to do so. The students were part of a sea turtle study group of the UH-Hilo Marine Option Program. I am the co-leader of this project with Dr. Walter Dudley, faculty member at UH-Hilo.

On May 14, 15, 16, and 17, we plan to return to Punaluu to do further work on our project. We will be camped at Pavillion No. 1 away from the parking lot, although our activities frequently require nighttime transit through the parking lot and along the black sand beach. To help prevent a repeat of the past violent incident, we would be most appreciative if more frequent patrols could be made of the park on the days we will be there, especially during the nighttime hours. Also, since the sole public telephone at the beach park is often out-of-order or unreliable, we wonder if it would be possible for your station to provide us with one of your walkie-talkie radios for the 4 days we will be at the park. This radio would, of course, only be used in the event of an emergency situation.

Thank you for your consideration of these requests. Our schedule is to arrive at Punaluu during the early afternoon of May 14 and depart about the same time on May 17.

Sincerely,

George H. Balazs
Wildlife Biologist

SIGHTING INFORMATION: TURTLE AND SEAL

Animal sighted (circle): TURTLE SEALNumber of animals: 1 Type, if known: _____Date: 9/12/84 Observer: Howard FentonTime: 10:00 a.m. Address & phone
(optional)Location: Near Punahoa Black Sand PavilionObserved from (circle): shore; boat (name: _____);

while skin or SCUBA diving (on surface or at _____ feet deep).

Estimated size (length): 2 feetCOMMENTS: (color pattern; injuries; scar patterns; tumors;
flipper tags: present Y/N, tag color, and if readable tag number;
bleach marks (number/letter); behavior; and weather.*beautiful sun shining
day*

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC & ATMOSPHERIC ADMIN.
NATIONAL MARINE FISHERIES SERVICE, F/SWC2
HONOLULU, HAWAII 96812

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P. O. BOX 3830
HONOLULU, HAWAII 96812

Certified Visitor

Both
STATE
HAWAII



Presented to

Has visited the
PUNALU'U BLACK SANDS RESTAURANT
and crossed
"THE MOST SOUTHERN POINT OF THE USA"

Enroute to

KONA - VOLCANO - HILO
ON THE 12th DAY OF April 1989

CERTIFIED
BY

Melane Andrews

EMMERICH GROSCH ASSOCIATES, INC.

PAHALA, HAWAII 96777 P.O. BOX 279

LUNCH

Cool refreshing drinks and a delicious tropical luncheon buffet is featured daily. . . local grown fresh products from surrounding plantations full of fresh taste and nutrition are abundantly featured on the "at you can eat" lunch buffet as well as on the ala carte menu. Local chefs are proud to present famous island dishes as prepared only at the Punaluu Black Sands Restaurant . . . enjoy.

SANDWICH FAVORITES

Served with potato, macaroni salad, cole slaw or crisp island chips.

BACON, LETTUCE and TOMATO 5.25
Crisp bacon, lettuce and fresh tomato on toasted homemade Sweetbread.

TUNA-WICH 5.25
Freshly mixed tuna fish on our own grilled homemade Sweetbread, topped with lettuce, alfalfa sprouts and tomato.

REUBEN SANDWICH 5.95
Thinly sliced corned beef and sauerkraut with Swiss Cheese on grilled rye bread.

HAMBURGER 5.95
Ground beef braised to order. Served with lettuce, alfalfa sprouts, tomato, onion and with our own mustard sauce, on a bun.

MAHI MAHI BURGER 5.95
Filet of mahi mahi deep fried to a golden brown. Served on a bun and topped with lettuce, alfalfa sprouts, tomato and tartar sauce.

FRENCH DIP SANDWICH 5.95
Thinly sliced roast beef on open face homemade Portuguese Sweetbread. Served with au jus.

CLUB HOUSE 6.25
Triple decked sandwich with layers of turkey, ham and bacon. Topped with lettuce and tomato. Choice of white or wheat bread.

SHANGRI-LA SANDWICH 5.25
Garden fresh vegetables served on homemade Portuguese Sweetbread, with Thousand Island dressing.

BEVERAGES

Kona Coffee .95
(Reg. or Decaf.)
Hot or Cold Tea .95
Fresh Island Milk 1.50
Soft Drinks 1.25

Fresh Fruits on Ice Cream 2.75
Macadamia Nut Cream Pie 2.25
Choice of Ice Cream or Sherbet 2.25
Ripe Island Papaya or Melon 2.25
Served with Vanilla Ice Cream Add. 75¢

DINNERS SERVED NIGHTLY FROM 5:30 P.M.

11-02 / 122

DIRECTED BY EMMERICH GROBCH-ASSOCIATES, INC.



**PUNALUU
BLACK SANDS &
RESTAURANT**

P.O. Box 279
Pohala, HI 96777
(808) 926-8528

Aloha!

We're delighted in welcoming you to our little corner of a tropical paradise to the Punaluu Black Sands Restaurant where yesterday Hawaii continues to thrive.

Everyone on our staff is committed to making your visit a most memorable experience.

Manalo for joining us.

PUNALUU

Punaluu means "Diving Spring" and takes its name from the fact that for their drinking water the natives had to dive (lu'u) down in the bay to an underwater fresh water spring (puna) some ways out from the shore at the Black Sand Beach. A man would take boards out to the place and dive under. When he came to the fresh cold water near the bottom of the bay, he would unstop his containers, fill them, then surface and bring them to shore. Today the Punaluu Black Sands Restaurant is surrounded by a fresh water lagoon. Formerly it was large and had ample fresh water from a deep spring named (Ko-wak-hu-o-kaula). In the old days the spring was kapu and used only for drinking purposes.

THE LEGEND OF "KAUILA" (TURTLE MAIDEN)

The legend relates that there was a time when stormy weather prevented the men from diving for water. There were two supernatural turtles who had come out of the ocean to Punaluu. Honu-po-o-kea (turtle with white head), the mother and Honu-ee (turtle with reddish-brown shell), the father. The mother gave birth to an object resembling a piece of Kaula wood which she buried in the sand to be hatched out by the sun. Then they dug into the earth and made a spring, then returned to the sea. When it was time for her "egg" to hatch, Honu-po-o-kea returned. When the thing she had laid hatched it was a turtle the color of polished Kaula wood. Mother and daughter lived in the spring until the baby turtle grew up. The young turtle was named Kaula. The spring came to be named "The rising water of Kaula." The turtle girl was able to assume human form and play with the young folk, but would become a turtle again when she went back into the spring. When bubbles came up in the spring, people knew the turtle girl was asleep in her home. Children used to catch fish and shrimps in the spring and Kaula watched lest the little ones fall in. The people loved Kaula for this and because her spring gave them drinking water. A color painting of "Kaula" at play can be seen in one of our dining rooms.

TROPICAL LUNCH BUFFET

The buffet selections include a variety of fresh tropical fruits on ice, selection of island greens, fresh and pickled vegetables including Hawaiian peppers, mushrooms, rootishes, sweet Hawaiian onions . . . all with a choice of homemade dressings. Tropical Waldorf salad, oriental pasta dishes, tasty vegetable and fruit molds and more. A choice of three (3) hot entrees (fish, meat, poultry), steamed rice and butter potatoes, and delicious Sweetbread. A selection of homemade desserts, and a choice of island grown coffee; hot, minted or fruit ice tea is included in the price.

\$8.95

CHILLED REFRESHING SALADS

FRUITS OF PARADISE IN PINEAPPLE

A refreshing mixture of locally grown fruits served with cottage cheese or sherbet in a carved pineapple boat. **6.95**

CHEF'S SALAD

Light crisp mixed greens covered with Julienne of turkey, ham and cheese. Served with hard boiled egg and toasted rye bread. Your choice of bleu cheese, thousand, french or Italian dressing. **6.95**

CHICKEN SALAD IN PAPAYA

Fresh chicken salad served in locally grown papaya half with a hint of lemon that adds a zesty flavor. Served with toasted Sweetbread. **6.95**

BEEF 'n CHICKEN

TERRIYAKI STEAK

Tender slices of beef marinated in our shoyu-ginger sauce. Served with rice or potato salad and vegetable of the day. **6.95**

HONEY CHICKEN

Crispy and juicy chicken with a touch of honey. Served with rice or potato salad and vegetable of the day. **6.95**

SIDE ORDERS

French Fries

1.95

Potato Salad

1.50

Fried Onion Rings

1.95

Cole Slaw

1.50

A 4% State Tax will be added on all menu items.

Local chefs are proud to present famous island dishes as prepared at the Punaluu Black Sands Restaurant.

APPETIZERS

LARGE SHRIMP COCKTAIL 5.95 **SAUTEED MUSHROOMS** 3.95
Served with a spicy cocktail sauce. In garlic butter.

DINNERS

Served with oven fresh Punaluu Sweetbread and a variety of fresh garden greens OR soup if you like.

Choice of:
Steamed rice, fried potato or baked potato, with condiments
Fresh local grown vegetables are served with your dinner.

From the Sea

FRESH CATCH OF THE DAY

Your waitress will be pleased to describe today's catch prepared with our mayonnaise butter, deep-fried, sauteed or grilled.

MARKET PRICE

MAHI MAHI FLORENTINE 13.95
Fillets of Mahi Mahi wrapped in spinach, bread with a special cream sauce and baked. A wonderful combination.

SCAMPI ALA PUNALUU 15.95
Punaluu's best: succulent shrimp sauteed in butter, wine, garlic and herbs.

SHRIMP TEMPURA 13.95
A Japanese classic: lightly coated with a flaky batter, our large and tender shrimps are deep-fried to a golden brown.

SHRIMP AND CRAB IMPERIAL 14.95
Large shrimp stuffed with our own chef's secret recipe of crab and fine herbs and baked. Delicious!

TERIYAKI BUTTERFISH 13.95
Generous portion of butterfish steak simmered in our shoyu-ginger sauce and broiled.

Combinations

OUR MOST POPULAR 13.95
Fresh Ono fillet or Breast of Chicken, lightly breaded, deep-fried and baked, stuffed with our rich and herbal spiced crab-mushroom stuffing.

TOP SIRLOIN STEAK 16.95
Served with your choice of:
FRESH CATCH OF THE DAY, STUFFED SHRIMP, SHRIMP TEMPURA or CHICKEN TERIYAKI

A fine selection of wine by the glass, carafe or bottle is available from our wine list.

A 4% State Tax will be added on all menu items.

DINNER

The Punaluu Black Sands Restaurant takes great pride in preparing and serving only the freshest seafoods available from local water and from the surrounding plantations, the freshest fruits and vegetables in season... both appetize.

From the Broiler

TERIYAKI CHICKEN 11.95
Tender boneless breasts of chicken, dipped in our own shoyu-ginger sauce and broiled to perfection.

KOREAN KAHLEI RIBS 12.95
Tender and thick beef ribs marinated in our own special kahlei sauce with sesame seeds and green onions and broiled to order.

PORK CHOPS 13.95
An island favorite: Tender and juicy pork chops fried or grilled. Served with thinly sliced sweet onion and fresh mushrooms. Served with our own homemade gravy and apple sauce.

TERIYAKI STEAK 14.95
An oriental favorite enjoyed by everyone. Tender sirloin steak marinated in our special shoyu-ginger sauce.

NEW YORK STEAK with Bernalise Sauce 16.95
Generous cut of choice sirloin steak broiled to order.

Specialties

GRILLED CALVES LIVER 10.95
Generous slice of Calves Liver lightly breaded and grilled to your taste, topped with sauteed onions and bacon.

TOKKATSU CHICKEN 11.95
Breast of chicken lightly breaded and deep-fried. Served with our own special sauce.

SHANGRI-LA SAUTEED VEGETABLE 8.95
A colorful array of vegetables sauteed in garlic and sesame oil and seasoned lightly with tamari sauce.

From our country bakery... daily fresh delicious Punaluu Sweetbread and a selection of homemade desserts and tropical toppings... enjoy.

BEVERAGES

Kona Coffee .95
(Reg. or Decaf.)
Hot or Cold Tea .95
Fresh Island Milk 1.50
Soft Drinks 1.25
Fruit Punch 1.50

DESSERTS

Fresh Fruits on Ice Cream 2.75
Macadamia Nut Cream Pie 2.25
Choice of Ice Cream or Sherbet 2.25
Ripe Island Papaya or Melon 2.25
Served with Ice Cream Add. 75¢

DINNERS SERVED NIGHTLY FROM 5:30 P.M.

11.88/76

TROPICAL LUNCH BUFFET

The buffet selections include a variety of fresh tropical fruits on ice, selection of island greens, fresh and pickled vegetables including Hawaiian peppers, mushrooms, radishes, sweet Hawaiian onions . . . all with a choice of homemade dressings. Tropical Waldorf salad, oriental pasta dishes, tasty vegetable and fruit molds and more. A choice of three (3) hot entrees (fish, meat, poultry), steamed rice and butter potatoes, and delicious Sweetbread. A selection of homemade desserts, and a choice of island grown coffee: hot, minted or fruit ice tea is included in the price.

\$8.95

CHILLED REFRESHING SALADS

- FRUITS OF PARADISE IN PINEAPPLE** 6.95
A refreshing mixture of locally grown fruits served with cottage cheese or sherbet in a carved pineapple boat.
- CHEF'S SALAD** 6.95
Light crisp mixed greens covered with Julienne of turkey, ham and cheese. Served with hard boiled egg and toasted rye bread. Your choice of bleu cheese, thousand, french or Italian dressing.
- CHICKEN SALAD IN PAPAYA** 6.95
Fresh chicken salad served in locally grown papaya half with a hint of lemon that adds a zesty flavor. Served with toasted Sweetbread.

BEEF 'n CHICKEN

- TERIYAKI STEAK** 6.95
Tender slices of beef marinated in our shoyu-ginger sauce. Served with rice or potato salad and vegetable of the day.
- HONEY CHICKEN** 6.95
Crispy and juicy chicken with a touch of honey. Served with rice or potato salad and vegetable of the day.

SIDE ORDERS

- French Fries 1.95 Potato Salad 1.50
Fried Onion Rings 1.95 Cole Slaw 1.50

A 4% State Tax will be added on all menu items.

LUNCH

Cool refreshing drinks and a delicious tropical luncheon buffet is featured daily . . . local grown fresh products from surrounding plantations full of fresh taste and nutrition are abundantly featured on the "all you can eat" lunch buffet as well as on the ala carte menu. Local chefs are proud to present famous island dishes as prepared only at the Punahoa Black Sands Restaurant . . . enjoy!

SANDWICH FAVORITES

- Served with potato, macaroni salad, cole slaw or crisp island chips.
- BACON, LETTUCE and TOMATO** 5.25
Crisp bacon, lettuce and fresh tomato on toasted homemade Sweetbread.
- TUNA-WICH** 5.25
Freshly mixed tuna fish on our own grilled homemade Sweetbread. Topped with lettuce, alfalfa sprouts and tomato.
- REUBEN SANDWICH** 5.95
Thinly sliced cornbeef and saurkraut with Swiss Cheese on grilled rye bread.
- HAMBURGER** 5.95
Ground beef broiled to order. Served with lettuce, alfalfa sprouts, tomato, onion and with our own mustard sauce, on a bun.
- MAHI MAHI BURGER** 5.95
Filet of mahi mahi deep fried to a golden brown. Served on a bun and topped with lettuce, alfalfa sprouts, tomato and tartar sauce.
- FRENCH DIP SANDWICH** 5.95
Thinly sliced roast beef on open face homemade Portuguese Sweetbread. Served with au jus.
- CLUB HOUSE** 6.25
Triple decked sandwich with layers of turkey, ham and bacon. Topped with lettuce and tomato. Choice of white or wheat bread.
- SHANGHAI SANDWICH** 5.25
Garden fresh vegetables served on homemade Portuguese Sweetbread, with thousand island dressing.

BEVERAGES

- Kona Coffee .95
(Hot or Decaf.)
Hot or Cold Tea .95
Fresh Island Milk 1.50
Soft Drinks 1.25

DESSERTS

- Fresh Fruits on Ice Cream 2.75
Macadamia Nut Cream Pie 2.25
Cheese of Ice Cream or Sherbet 2.25
Ripe Island Papaya or Melon 2.25
Served with Vanilla Ice Cream Add. 75¢

DINNERS SERVED NIGHTLY FROM 5:30 P.M.

11-88 / 102

DIRECTED BY EMMERICH GROSCHE ASSOCIATES, INC.

SB&A

6-11-89

Brewer confirms pending Punalu'u sale

By Hugh Clark

Advertiser Big Island Bureau

PUNALU'U, Hawaii — C. Brewer & Co. Ltd. officials met with employees and community supporters last week to discuss a pending sale of its Punalu'u Sea-mount intramural Hawaii Resort to a Japanese company.

Details of the sale of the 200-plus-acre project were not disclosed, nor was the buyer identified.

Mufi Hannemann, C. Brewer vice president put in charge of the Ka'u project two years ago, confirmed the pending deal yesterday.

Hannemann stressed that final terms of the sale have not been reached because of Brewer's desire to provide job security for resort employees in Ka'u, who number less than 100.

The sale of the resort should not come

as a surprise, Hannemann said. Brewer officials have long said they needed outside money to pay for an expansion of the resort that could cost as much as \$500 million.

Brewer won Hawaii County approval last year for the expansion after a long and controversial series of hearings before the Planning Commission and County Council. Major elements of the expansion include a 350- to 500-room hotel and a commercial village center.

There is now a golf course, a tennis complex and condominiums in the resort but no hotel. The development is located behind the Punalu'u Black Sands Beach between Pahala and Naalehu.

Punalu'u opened in the early 1970s and suffered several setbacks, including a 1975 tsunami that gutted the Punalu'u Restaurant. It has since been rebuilt.

While there have been several Japanese purchases of residential and resort property in North Kona and South Kohala, the Punalu'u sale would be the first major purchase by foreign investors on the eastern side of the Big Island.

Hannemann said he held the meeting with employees to try to reassure them and to put an end to a week of rumors about the sale and its impact.

He said the sale does not affect Brewer's commitment to Ka'u agriculture — including sugar, macadamia nuts and a fledgling orange industry — nor its interest in a spaceport at Palima Point southeast of Pahala.

"We still expect to have an important role in the district and we want any sale that may come in the future to be handled in the best way possible for the Ka'u residents," said Hannemann.

RR

Tuesday December 22, 1987

RECEIVED
DEC 26 1987

Div. of Aquatic Resources

William Paty, Director
DEPARTMENT OF LAND AND NATURAL RESOURCES
1151 Punchbowl Street
Honolulu, HI 96813

DIVISION OF AQUATIC RESOURCES	
DIRECTOR	Suspense Date: <input checked="" type="checkbox"/>
COM FISHERIES	Draft Reply <input checked="" type="checkbox"/>
AQ RES/ENV	Reply Direct <input type="checkbox"/>
AQ RECRN	Comments <input checked="" type="checkbox"/>
STAFF SVCS	Information <input type="checkbox"/>
FISH MGMT	Comp. Act & File <input type="checkbox"/>
STATISTICS	Return To: _____
AFRC	Copies to: _____
SECRETARY	Remarks: _____
OFFICE SVCS	_____
FED AID	_____

RECEIVED
DEC 24 9:41
DIVISION OF AQUATIC RESOURCES
STATE OF HAWAII

Dear Mr. Paty.

Aloha. The purpose of this letter is to call your attention to the plight of turtles nesting on Punaluu Beach in Ka'u Hawaii.

My second home is in Pahala since 1970 and my parents live in it. Besides, my mother was born in Waiohinu Ka'u, and this is why I feel I can speak with some authority on the matter.

Problem: The problem is how Punaluu Beach can be shared with both the needs of female turtles who instinctively want to lay their eggs there and people who want to swim and shoreline fish there.

Background: You see, in August of 1987, my husband and I and parents were at Punaluu Beach and lo and behold, we spotted at least 2 dozen turtle heads poking out of the water periodically.

I feel they were checking to see if the black sand beach was safe for them to come ashore to lay their eggs.

It wasn't safe of course, because there were many tourists on the sand, and a few of them in the water near the shore. One local boy was spear fishing along the rocks near the shore.

Summary statements: The problem, as I've outlined it above is very simplistic I know. For I am aware of the development of the SeaMountain Resort complex in the Ninole-Punaluu area.

I do know however, that a reasonable solution can be worked out to service the needs of the turtles and human beings, and I would be happy to be part of a consortium to problem solve on the matter.

Sincerely yours,

Puanani Woo

Puanani Woo
4300 Waiialae Avenue, 601A
Honolulu, HI 96816
Phone: 737-1140, home
842-8279, work

cc: Mr. Richard Lyman, Trustee, B.P. Bishop Estate
3 Enclosures



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center Honolulu Laboratory
2570 Dole St. • Honolulu, Hawaii 96822-2396

January 26, 1988

F/SWC2:GHB

Ms. Puanani Woo
4300 Waiialae Ave. #601A
Honolulu, HI 96816

Dear Ms. Woo:

A copy of your letter to Mr. Paty dated December 22, 1987, and his response of January 4, 1988, have been forwarded to my office. I certainly appreciate knowing about your interest in the conservation of Hawaiian sea turtles and the habitat upon which they depend, such as at Punaluu Bay in the Kau District. Punaluu Bay, and the immediate adjacent coastline, is probably the most concentrated and highly-visible site for foraging green turtles, Chelonia mydas, throughout the Hawaiian Islands. In recent years we have tagged and studied turtles at this important location in collaboration with the Marine Option Program of the University of Hawaii at Hilo. I have enclosed two articles describing this work, as well as other literature about sea turtles in general.

The two dozen or so turtles that you saw in August of 1987 were almost certainly green turtles feeding on the benthic alga (limu), Pterocladia capillacea, that grows on rocks close to shore. The Hawaiian green turtle is a migrant breeder which has been shown to nest almost exclusively at French Frigate Shoals 500 miles to the northwest of Honolulu (see enclosed literature). The species of sea turtle that has been recorded nesting at Punaluu is the hawksbill, Eretmochelys imbricata. This turtle does not forage inside Punaluu Bay, but rather along the coastline's coral encrusted bottom in deeper water offshore down to 100 feet or so. The hawksbill is a critically endangered species in Hawaiian waters by reason of its very low numbers, its limited and in many cases impacted nesting habitat, and its "look-alike" problem when illegal green turtle hunting occurs. Your concern about habitat-problems for nesting turtles (hawksbills) at Punaluu is justified. However, the more immediate threat to sea turtles at Punaluu comes from direct and illegal killing in marine habitat that has consistently occurred for many years now. The green turtle is the intended target of this effort. The Hawaiian Sea Turtle Recovery Team is aware of this and other problems, and has incorporated appropriate recommendations for action in the draft Recovery Plan. The plan is now undergoing review within the National Marine Fisheries Service and should be completed within the next few months.



In closing, I should briefly mention that the effective management and recovery of sea turtles are, unlike many stocks of fish, heavily constrained by the turtles' own biological characteristics. These include a relatively slow growth rate, delayed sexual maturity, and low annual reproductive effort. The protection and recovery of Hawaiian sea turtles will not be an easy task, but I am pleased to report that we are making a good start. Again, thank you for your interest.

Sincerely,

George H. Balazs
Zoologist

Enclosure

cc: W. G. Gilmartin
R. S. Shomura
W. W. Paty
E. C. Fullerton

Ka'u News

BOXHOLDER, LOCAL

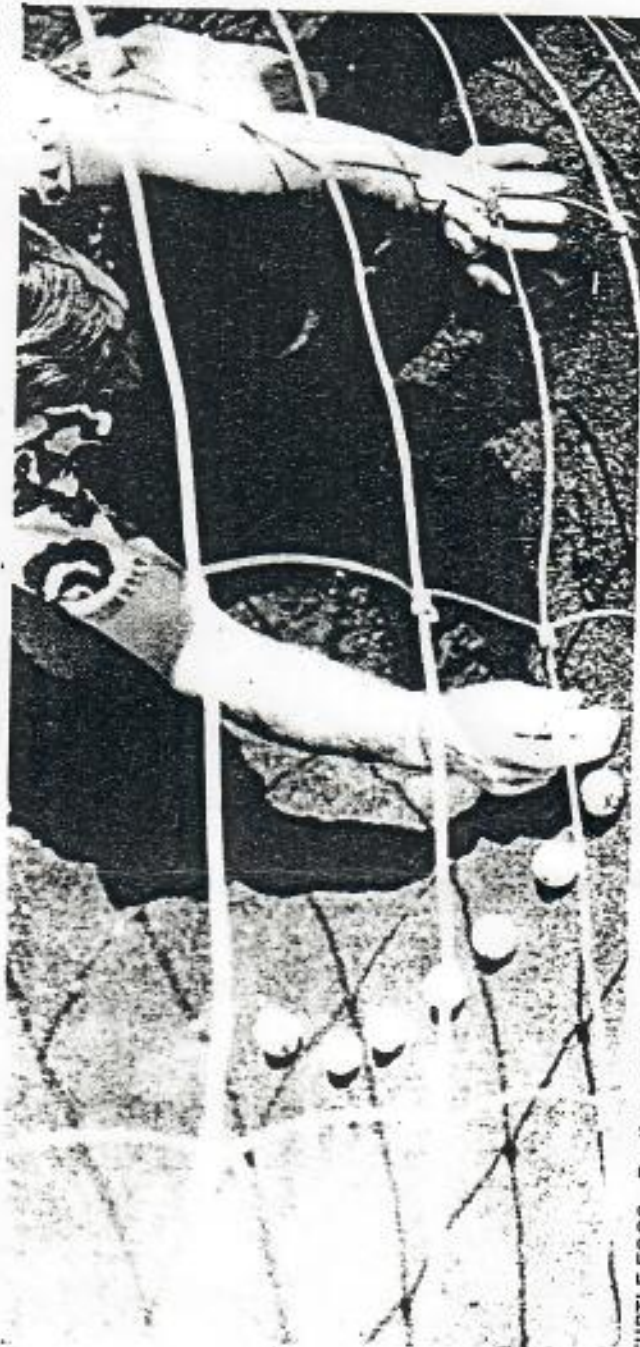
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VOL IV, NO.9

KA'U, HAWAII

AUGUST 5, 1975



TURTLE EGGS—For the second summer in a row a female turtle has laid her eggs on the sand at Punaluu Beach. Last summer a Hawksbill laid her eggs and in late August the nest hatched and the baby turtles crawled into the sea. One early morning in late June a new nest with eggs was discovered by Ar-

nold Howard of Punaluu. Here, Ed Crook, vice president, Hawaiiana Investment Co., carefully looks at a few of nearly 200 eggs laid near the same spot. The area was secured by a wire fence to keep the eggs from being disturbed until they hatch sometime in August. —Ka'u News Photo.

Mashiyama Ka'u Jaycees Prexy



Richard Mashiyama

Richard Mashiyama, outreach counselor at Ka'u High School, is the new president of the Ka'u

Price of Punalu'u project going up

By Nancy Davlantes

Seeking to achieve that delicate balance between a successful resort and long-term benefits to the surrounding community, C. Brewer & Co. Ltd. has revised its plans for the proposed \$500 million expansion of its Ka'u resort at

Punalu'u.

Initially, Brewer was only going to redo its environmental impact statement when it decided to withdraw the document last February.

But subsequent analysis and re-evaluation in light of concerns raised by some area residents led to revisions that will up the price of the project by more than \$6 million.

"There's a significant cost to the revisions," said Pete Moynahan, senior vice president for C. Brewer Properties.

"First," he said, "there's the replanning and processing of the EIS," which will run between \$250,000 and \$300,000. "Then the new plan has a higher direct cost of \$1 million because we're moving roads and golf holes. And third, the plan will yield fewer units in the shoreline area, and that's kind of a double whammy

because not only are there fewer units, but there are fewer valuable units, and we'll end up with a \$5 million reduction in value received. We don't do things like that lightly."

Brewer's original plans called for adding two hotels of up to 1,400 rooms, more than 1,000 multifamily units, about 75 single-family homes, and 75,000 square feet of commercial space.

Now, after several months of careful deliberation, including working with Big Island Mayor Dante Carpenter, the plans call for a re-configured resort of considerably lower density.

"We'd started out with a plan that we thought provided the greatest potential visitor satisfaction," Moynahan said. "But in response to community concerns, we've moved out of the shoreline area."

The planned 350-room Ni-nole Hotel would be moved from the original shoreline setback, to a bluff overlooking the beach and integrated into the planned Punalu'u Village residential area.

Another beach for the hotel is also planned to reduce the impact when more tourists visit the area.

The number of condominium units that would eventually be built behind the new setback have been reduced by a third, and a recon-

figured golf course will use a part of the area vacated by the relocation of the Ninole Hotel.

Another 150-room, three-story hotel would be built mauka of the existing restaurant and adjoining ponds.

"We've increased the setbacks significantly," said Moynahan, "from a minimum of 70 feet to 250 feet from the shoreline, and we're up 30 feet in elevation. So the impact on the shoreline will be significantly less."

Acknowledging that the new plans, which were announced last week at Carpenter's office, did not quell all the opposition to the project, Moynahan said "there will always be people that won't be satisfied. . . . But a resort must have proximity to the shoreline. You can't have a resort in the mountains."

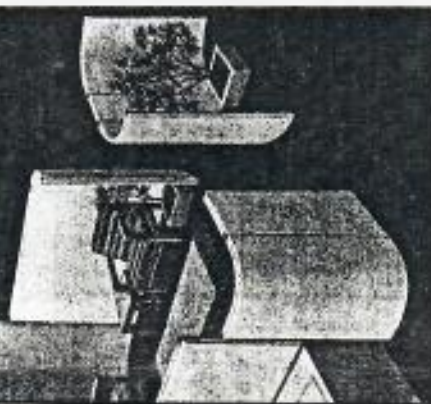
He said the goal of this effort "is to bring stability to Ka'u with a proven successful industry, and give the visitor a quality experience. If he likes it, he comes back, and that means more jobs. And long-term jobs net long-term benefits. A lot of people will come and go, but either you have impact plus jobs, or impact and no benefits."

To some degree, he reflected, it's a compromise.

"What we'll never know is which is better — a hotel on the water or one off the water," and whether by making the revisions "we have pushed (the resort) over the cliff and made it not success-

ful."

cliff and made it not success-



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March 30, 1989

Box 4

96777

Dear George,
Aloha!

Sorry we were not at home when you stopped by.
Yes, it sure has been quite sometime since the last
time & it's about time!

So far, our weather's been pretty nice and Arnold's been
able to go out fishing every chance he get.

Yes, there are quite many turtles feeding close to shore.
They are one of our tourist attractions, especially for
those who never actually seen one in the ocean, only in
tanks. They are all around the place, from the area
where you are thinking of setting your nets, all the way
over to the boat ramp, close to shore, -even to where you
saw them. They are so tame, one can even catch
them with out a net. I once have actually seen a
man tourist who caught one and brought it on shore,
took pictures and let it go back in. Then there are
those who swims along side, using their underwater cameras
& watch them feed. A tourist driver caught one close to
our shop area, held it high out of the water while his
people took pictures of him & the turtle from standing
on the rocks close to the water. It was a nice day and
the tide was low. Usually one cannot notice or see them
as much on a windy and rough day & when the tide is high.

D.

If you do come early enough, you should watch and see them for yourself before setting the nets.

Haven't seen or heard of any nesting on our beach yet. I have heard people talk about some who poach but we haven't actually seen or heard names given. Guess they do it at nite.

Some of the throw net fishermen get so angry at times. Upon seeing a school of fish, throws the net over them and not knowing a turtle was along feeding with them, gets caught too and being so large & etc, tears their nets apart.

This is the time when the Akule comes into the bay. Arnold as well as others use cross nets to net them for bait and when they do, hope and pray that a stupid turtle is not caught too.

I think I had better sign off now as it's getting late, and I have a eye doctor and dentist appointment tomorrow in Hilo at 8:30 a.m. & 11:15. Got to leave here by 7 a.m. Be seeing you soon - Bring pictures of the boys! love to see how much they have grown -

A love! to Linda & boys -

Sincerely,
Janette
and Arnold



University of Hawaii at Hilo

COLLEGE OF ARTS AND SCIENCES
Division of Natural Sciences

July 21, 1987

Mr. Mufi Hannemann
Vice President, Corporate Development
C. Brewer and Company, Limited
Punalu'u Resort
P. O. Box 85
Pahala, Hawai'i 96777

Dear Mr. Hannemann,

Since 1983, the UH-Hilo Marine Option Program has participated in yearly projects to monitor green turtle populations, their feeding habits and growth rates, at Punalu'u in Ka'u. Growth rates among green turtles along the Ka'u coast appear to be more rapid than among turtles elsewhere in the main Hawaiian islands. Because of this faster rate, the Ka'u green turtle population may make up a large proportion of the breeding colony from French Frigate Shoals where it is believed that all Hawaiian green turtles go to breed. We are gratified to note C. Brewer's acknowledgement of the importance of Punalu'u's coastline as a concentrated, resident foraging site for the threatened green turtle, Chelonia mydas, and as a principal nesting site for the endangered hawksbill turtle, Eretmochelys imbricata, in your EIS published earlier this year.

We are also pleased to see that C. Brewer plans to "conduct surveillance programs to...monitor marine organisms in the coastal ponds, shoreline, coastal waters or wetlands," and to "conduct, assist, facilitate, schedule or coordinate scientific or educational activities in the Management Area and Management Area Buffer Zone," as well as to "monitor water quality and faunal assemblages" within these areas "on a periodic basis to assess the ecological viability and conditions of the ecosystems and wetland habitat." The significance of the Ka'u coastal waters for these registered endangered species may prove to be greater than previously thought.

523 W. LANIKAULA STREET
HILO, HAWAII 96720-4091 • TEL: (808) 961-9383

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It is because of this significance that we plan to continue our population, feeding and growth rate studies at Punalu'u in conjunction with the National Marine Fisheries Service, high school groups and community volunteers. Our work involves three days of capturing, measuring, weighing, blood-sampling, counting, tagging, and releasing as many turtles as we can. Fence nets are hung by floats and anchored in the bay and over the next two nights 4 groups work 3-hour shifts throughout the night to locate, capture and carry ashore any turtles weighing less than 200 pounds for measuring and tagging at day-break, after which the turtles are then released. At least 15 University MOP and high school students, not including almost as many scientists, faculty, and community volunteers, work exhaustingly over this 72-hour period to collect as much data as possible not only for the accumulation of information but for comparison purposes with previous years' and future studies. We also plan to videotape our next year's operations both on shore and underwater. And as we have stressed in the past, safety, both of student and volunteer participation as well as that of the turtles are paramount concerns.

In the past, various governmental agencies' and community donations have allowed us to adequately conduct our project down at Punalu'u. Nets, floats, anchors, wet suits, camping equipment, stoves, coolers, first aid kits, lights, tents, tables and chairs, tagging, measuring and blood-sampling equipment, tools, emergency equipment, videotape and editing equipment and as well as some transportation vehicles are provided by the University, NMFS and individual donations. But even with the generosity of many people, our students have had to beg funds for supplies like gasoline, food and leader stipends, as well as to rent extra vans for transporting equipment and people from as far away as Waimea. Out of pocket expenses have become somewhat of a barrier for some students' participation.

We are requesting the following amount from C. Brewer and Company, Ltd., to continue our turtle studies during the Spring Break next year March, 1988:

2 (15-passenger) rental vans for 3 days	\$ 450
Gasoline	50
Food, paper goods, cooking fuel, ice first aid supplies, tapes, etc. \$12/day x 3 days for 15 students	540
Stipends	
1 Project Coordinator: @ \$100/month for 2 months	200
2 student assistants for logistics: @ \$50/month for 2 months	200
<u>TOTAL AMOUNT REQUESTED</u>	<u>\$1,440</u>

The Project Coordinator (an upper division MOP student) and the student assistants will complete written reports and finalize an edited videotape of the work done at Punalu'u during the remainder of the semester under the supervision of MOP faculty at UH-Hilo. These reports and videotape will be made available to C. Brewer and Company, Ltd.

We hope that C. Brewer and Company, Ltd. will wish to show their active support for this project and the research and educational benefits it represents by helping fund our work. Please contact either myself or Mr. George Balazs of the National Marine Fisheries Service in Honolulu so that we may discuss the project further.

Sincerely,

Dr. Walter C. Dudley
Coordinator, UH-Hilo
Marine Option Program

LETTERS

Just say no

Editor:

To all those who despair that our opposition to Governor Waihee's proposed rocket launch facility will not be heard — take heart.

Do not be discouraged by the apparent arrogance of former admiral Hayward. His long and illustrious career in the military has prepared him to give orders, not to listen to the people. He is ill at ease in situations where people want to know the truth and all the details of his activities, preferring instead that we follow orders and leave the strategy to him. The good news is that his power is extremely limited, and those politicians who control him have heard us.

We were very fortunate to have had the opportunity to hear William Paty speak at a meeting of the Greater Kona Community Council on the evening of March 25. Paty serves as chairman of the Board of Land and Natural Resources, and also as chairman of Governor Waihee's re-election campaign. Many questions concerning the rocket launching facility were asked of Paty that night. He let us know that Gov. Waihee was aware of our strong and broad-based opposition to that project.

Then Councilman Harry Ruddle brought the loudest applause of the night when he announced that he and Helene Hale had spoken to U.S. Senator Daniel Inouye and U.S. Representative Daniel Akaka to let them know that Hawaii County would prefer not to have a rocket launch facility developed here. He further informed us that the facility was not Waihee's idea, that he had "inherited" it. It's starting to sound as if he wished it would disappear. If he would just say no, it would.

Let's all continue to encourage Gov. Waihee to re-evaluate his position, as he certainly shouldn't feel obligated to realize someone else's bad idea. Call 1-800-468-4644. Helene Hale and Harry Ruddle have heard the people and have taken action. Governor Waihee should do the same and withdraw his support from this project.

Diane Keffer
Keokey

BY BILL WITTIG-HARBY

Poised between antiquity and

an uncertain space-age

future, this area offers

natural marvels and a rich

Hawaiian heritage

Ka'ū- Green Sand and Ancient History

About 80 of these ancient mooring holes are carved into the lava rock at South Point.



BY BILL WITTIG-HARBY

According to tradition, the first people to set foot on Hawaiian soil were Polynesian voyagers who landed at Ka Lae—now more commonly called South Point—in the Ka'ū District on the island of Hawai'i. Archaeologists believe people first came to Hawai'i around 350 A.D. The South Point area is where a seaside cinder cone has created a beach of green sand, where deep-sea fishing is done right from the cliff, and where a small lava tube filled with sea water has been declared "biologically unique" on the planet, thanks to the extremely rare species of creatures which call it home. But this is also where rows of huge electricity-generating windmills stand in an otherwise undeveloped expanse of grassland, and where rockets may blast off into space one day in the future, changing life in the district more drastically than even sugar cane did during the century before.

Clearly, Ka'ū is a singular place. Yet remarkably few people—neither Hawai'i residents nor visitors—know its treasures. For many, this district along the southeastern flank of the great shield volcano, Mauna Loa, is little more than a dry, rolling stretch of two-lane highway connecting the resort areas of Kailua-Kona and South Kohala with Hawai'i Volcanoes National Park and Hilo.

If they think of Ka'ū at all, they think of the Ka'ū Desert.



Center was a nonprofit foundation with a board of trustees. Led by Laila and Thurston Twigg-Smith, who pursued their vision with enthusiasm, the board began actively looking for a museum site and considering various possibilities.

On a trip to Europe, the Twigg-Smiths visited a museum that convinced them that a historic home in a scenic setting made a beautiful place to display contemporary art. In Denmark, outside Copenhagen, they discovered the Louisiana Museum, named for the founder's three wives, all of whom, remarkably, were named Louise. Says Laila, "We were taken with the way it was built, starting with an old house with wings and corridors displaying a lot of art. It was a modern gallery, though it never lost the feeling of the old home. It became our model."

When the *Advertiser's* stockholders offered the Makiki Heights estate as a museum site, the Contemporary Arts Center had found a new home and a new identity as The Contemporary Museum. A large portion of the *Advertiser's* art collection found its home as well.

The *Advertiser* gave about 1,200 works from its corporate collection to The Contemporary Museum. This core of the museum's permanent collection has been augmented by other gifts of art—welcome support for the fledgling museum, which doesn't yet have an acquisition fund. Says Laila, "We've been lucky. A lot of leading art dealers around the U.S. gave gifts of major works to the museum, and some dealers continue to on an ongoing basis."

She points out that The Contem-

porary Museum became a reality with the support of many people: major Hawai'i and national foundations, and corporate and individual donors. It continues to be supported by these sources, along with memberships. It now has about 2,000 members, which is quite remarkable considering it just opened two years ago.

Says Laila, "I believed Hawai'i needed a contemporary museum and needed a showcase for Hawai'i artists. That's very important. The Academy of Arts couldn't handle that in depth; its mission is to be a little bit of everything, and it is basically the only museum serving the community on that level." The Honolulu Academy of Arts, with collections from around the world and throughout history, is Hawai'i's only general art museum. Laila sees The Contemporary Museum as a sister museum, complementing the Academy.

"In focusing on art of the last 40 years," she says, "we try to choose representative samples from each decade that illustrate important aspects of contemporary art—various ideas, various styles and movements."

In its collection, The Contemporary Museum's emphasis is on Island artists. In its exhibitions, the museum aims at achieving a good balance between Hawai'i art and national and international artists. Says Laila: "I think it's important that artists in Hawai'i—and Island residents who



Pat Rizzy




Paul Kocikama

Upper left: The stately historic home with its expansive lawns and gardens provides a congenial counterpoint to contemporary art.

Upper right: Laila Twigg-Smith is pictured with a stoneware sculpture by Arnold Zimmerman.

Lower: Beautiful hues adorn the richly textured porcelain sculpture "Murasaki #1" by Toshiko Takaezu, from the State Collection.

Continued on page 58



Olivine crystals from the surrounding cinder cone give Green Sand Beach its color.

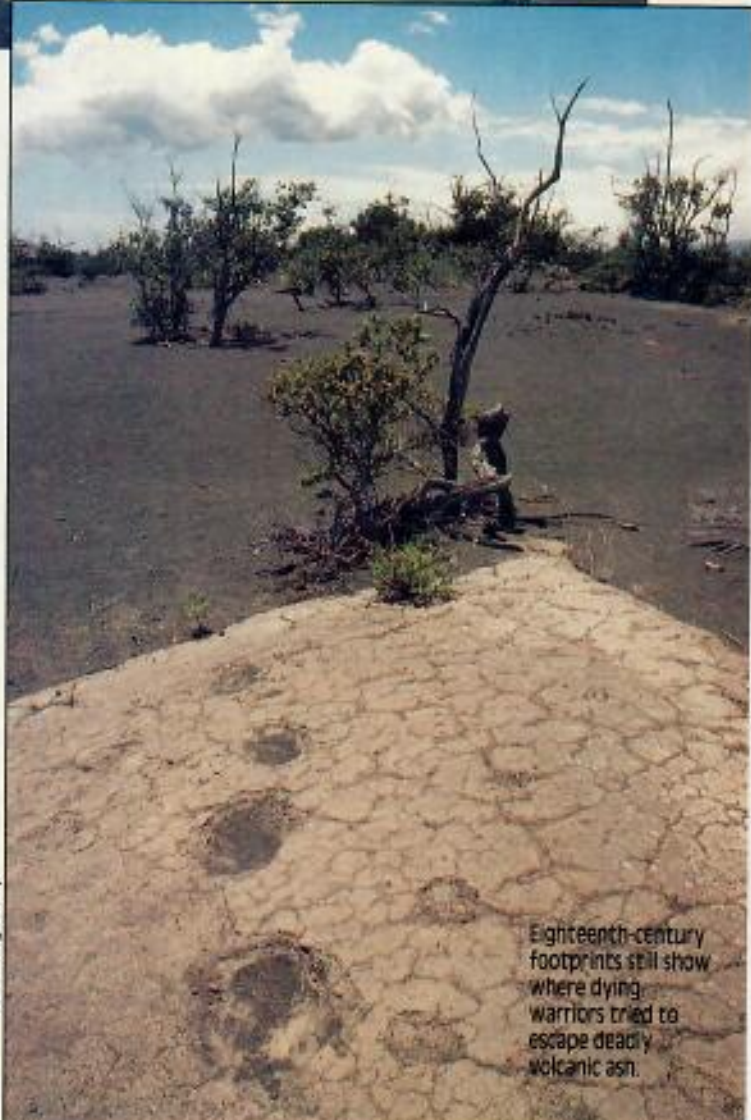
Peter French

A traveler driving down the steadily descending highway from Hawai'i Volcanoes National Park and into the district is surrounded by rough, matte-black 'a'a lava interrupted by gnarly, stunted 'ōhi'a trees and low scrub. Farther down, the 'a'a gives way to flows of smooth, ropy pāhoehoe lava, pockets of fine cinders and more 'ōhi'a.

After the 37-mile marker a sign indicates the Ka'ū Desert trail. Besides offering an interesting walk through a glassy black landscape, the trail passes by 18th-century footprints pressed into clay, evidence of a deadly moment in Hawai'i's volcanic history. In 1790, an army was marching to battle Kamehameha, the young warrior chief who was later to unite the Islands under his rule. Kīlauea chose this moment to let loose with a rare explosive eruption which sent massive clouds of volcanic ash into the air. As the ash fell, it mixed with moisture in the air and deposited a layer of clay on the ground. Eighty people reportedly succumbed to the suffocating gases and ash. Footprints still embedded in the clay show where they took their last steps. Most of the prints are deeply eroded, including the two under a shelter along the trail (about 20 minutes' walk in). But a few, off to the right of the trail, on a small open patch of clay about 50 yards before the shelter, still show clear impressions of bare feet.

The Ka'ū Desert extends down to a rocky coastline of high cliffs and surging seas. Yet some of Hawai'i's most remarkable beaches are found here and around South Point. Several of them are pretty remote. Halapē Beach is at the end of a 7.2-mile trail that drops 3,000 feet, but campers who've made the trip say it's worth it. Just offshore of the small white sand beach stands a group of topless coconut palm trunks. This grove sat high and dry on the beach until a severe earthquake

BOB WATSON/HARTZ



Eighteenth-century footprints still show where dying warriors tried to escape deadly volcanic ash.

shook Ka'ū on Nov. 29, 1975. Campers at Halapē felt the ground shake just after 3:30 a.m. An hour later, a more massive jolt (7.2 on the Richter scale) caused the shoreline suddenly to sink about 10 feet. Two campers were killed when a tsunami generated by the earthquake slammed into the shore. Though the quake put the little beach underwater, another pocket of sand formed within a month.

Ka'ū's most famous beach, the black sands of Punalu'u, was also lashed by natural forces. The worst hit in 1868, when earthquake-generated waves reaching as high as 50 feet inundated the whole southeastern coast of the island. The fishing village at Punalu'u was laid waste, and the black sand beach swept away. At nearby Nīnole, a man who was caught in his house by the waves was swept out to sea. A strong swimmer, he grabbed a plank, and eyewitnesses reported he rode a 50-foot wave safely to shore.

The sand returned even before Punalu'u was rebuilt. By the 1880s, the village had become the principal port town of Ka'ū, from which the burgeoning sugar industry was shipping its product. Once roads were improved, Punalu'u's commercial importance waned. But the beauty of the coal-black sand—created by the decomposition of rough 'a'ā lava—remains.

"Punalu'u" means "diving spring." Ka'ū is blessed with numerous freshwater springs, some of which bubble up at sea's edge, some beneath the sea. Native Hawaiians used to dive down off Punalu'u Beach with stoppered calabash gourds to get drinking water. When they felt the cold fresh water surging up, they would uncork the gourds and let them fill.

Overlooking the lagoon, beach and surf is the Punalu'u Black Sand Restaurant, and an adjoining gallery/museum. Adjacent to the beach, a grassy area with shelters and showers provides a spot for tent campers. A golf course is just down the road.

Nearly as well-known and even more stunning than the black sands of Punalu'u, is Green Sand Beach, farther south. This is the most concentrated deposit of glassy olivine granules along the Ka'ū coastline, though green sand is mixed with more black sand elsewhere. (One remote beach, Pu'u Hou, has green, black and red grains of sand intermingled.) The olivine comes from eroding seaside cinder cones. The heavy concentrations of the mineral at Green Sand Beach are given up by Pu'u o Mahana, a cinder cone standing at the

edge of a small bay exposed to the onslaught of the reefless sea. When the water is calm, this is a nice place to swim close to shore—after you hike the 2.5 miles in from the boat ramp at South Point.

The broad, flat plain of South Point appears pretty desolate to most visitors who trundle down the 12 miles of narrow paved road to see the southernmost point of land in the United States—and the area which, according to lore, was the Polynesians' first landfall in Hawai'i. Often parched, covered in dry grasses and scrub whipped by winds

Palikapu Dedman, a spokesperson for the group, says, "We have teachers come down who've lived in Ka'ū all their lives and didn't even know what was down here. These children are going to be parents someday and this is the time to plant the seed." Walking tours can also be arranged for cultural and environmental groups.

One of the most vivid historical sites is where approximately 80 ancient mooring loops were carved through lava rock. Two swift currents meet at South Point and push relentlessly straight out to sea. Hawaiian fishermen would tie

Peter French



One of the natural freshwater springs of Ka'ū is just inland at Whittington Park.

constant enough to have generated a hi-tech windmill farm, the land and how it will be used are subjects of controversy which have divided the community.

Ka 'Ohana O KaLae ("The Family of the Point") is a small group of Hawaiians (and others desiring to preserve traditional ways and unspoiled fishing grounds) who have established a curatorship program at South Point's Ka Lae National Historic Landmark Area. They have cleaned up years of trash left by visitors and fishermen, restored ancient lava rock walls and identified and tagged native plants. They are also negotiating with the Bishop Museum to return to them ancient bones which the museum has held since earlier excavations at Pu'u Ali'i, a nearby burial ground on a sand dune. The group plans to reinter the bones at the original site. Pu'u Ali'i is one of the stops on the free walking tours the 'Ohana conducts for schoolchildren, teachers and parents.

off one end of a heavy rope to the mooring holes, and attach the other end to their canoes, which they let drift out in the current to the deep water just offshore. Here fish were—and are—plentiful. (Today fishermen attach small sails and floats to their line and reel it out from the low cliff at the point. Their hooks hang down 60, 80 or 100 feet, where 'ahi and ulua are found—gourmet fish normally only taken from boats out at sea.)

Standing just inshore of the cliffs are the walls of a small ancient *heiau* (temple). Archaeologists have recovered fishhooks from beneath nearby Pu'u Ali'i (predating the burial site), which indicate a settlement as far back as 750 A.D. If the earliest voyagers (estimated to have arrived around 350 A.D.) did indeed first come ashore on the rocky coast of Ka'ū, they left no hard evidence we have found so far.

Another unique feature of the area is

Lua O Palahemo, an anchialine pool (a saline pond with no surface connection to the ocean) formed from a lava tube. "It is considered the gem of Hawai'i anchialine pools," says Nature Conservancy of Hawai'i ecologist Sam Gon. Because of its high salinity and rich diversity of rare animals, including one species of shrimp known nowhere else in the world, the Conservancy has officially designated the pool a biological environment unique on the planet.

These sites are what Dedman and Ka 'Ohana O KaLae wish to preserve.

Palikapu Dedman's commitment to

ing high tide and at night where the fish are. He learned about tides, the seasons and a lot more."

Palikapu Dedman grew up in Ka'ū and Honolulu. His teachers were the local fishermen along the coast around Punalu'u. "I used to be a bag boy. When we were young on the beach, you'd see a fisherman walking by, you'd run up and ask to carry his fishing bag. Then you'd tail him all the way down the beach and carry his fish for him so he didn't have to pack it. He had his net to carry. Then when the fishing was over, he'd give you fish to take home. And

and completion was originally slated for as early as 1984. Now Gov. John Waihee, a staunch supporter of the project, hopes to break ground within five years. But because of tenacious local opposition and growing numbers of politicians voicing their doubts, the spaceport is still in limbo and may or may not get off the ground.

These matters do not affect the day-to-day mood of Ka'ū, though. The small communities of the district, Pāhala, Nā'ālehu, and Wai'ōhinu, are friendly rural towns. Born during sugar's boom days to process and distribute the crop,

Peter French



Homesteads built during the sugar boom, like this one in Wood Valley, are still tucked into the Ka'ū countryside.

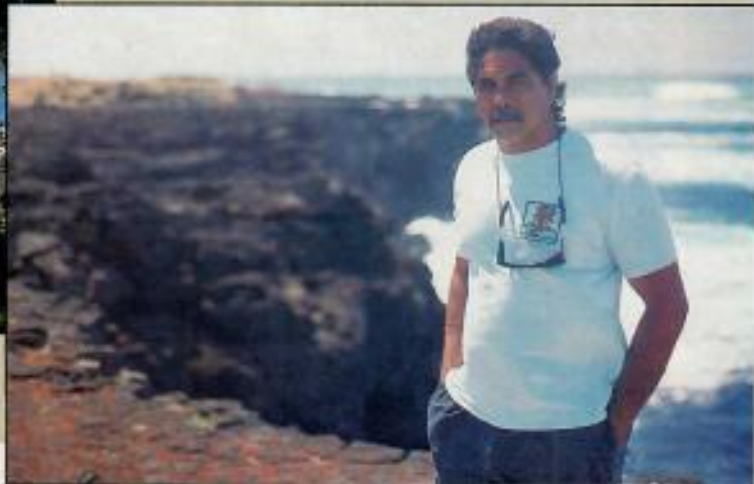
perpetuating traditional Hawaiian culture was acknowledged in 1989 when he was the recipient of a Folk Arts Apprenticeship Award given by the State Foundation on Culture and the Arts. A master of the Hawaiian throw net method of fishing, he knows currents, tides, winds, migration patterns, net-making and repair, and is versed in aspects of astronomy and botany related to fishing. Dedman shares his knowledge as an occasional guest speaker at University of Hawai'i-Mānoa ethnic studies classes. And, as teacher during the intensive six-month apprenticeship, he shared his knowledge with his son, Alec, 17 at the time, who had been fishing with him since early childhood. Then as now, they fished along the coast around Punalu'u. Says the senior Dedman, "He had to learn how to find the fish, how to watch the shoreline during low tide to see where the seaweed is being eaten, so he'd know dur-

you'd see all the different techniques, the different styles. You'd watch and borrow the net and try it out in the sand where you wouldn't ruin it."

Dedman served in the U.S. Army in Germany from 1964 to '67, then spent 12 years in California. "When I came back I lived down at the beach at my grandparents' and I didn't have any work. So I had to use the net to survive. It's like swimming, you remember how. I survived well with that net."

Today Dedman still puts food on the table with his net. But most of his time is devoted to Hawaiian rights issues, both through Ka 'Ohana O KaLae and as president of the Pele Defense Fund, a group opposing state plans for developing geothermal energy and the construction of a commercial rocket launching facility in Ka'ū. Plans to build a spaceport were first announced in 1982

Fisherman Palikapu Dedman, master of the traditional Hawaiian throw net, learned his craft along the rugged Ka'ū coast.



Bill Wittig-Harby

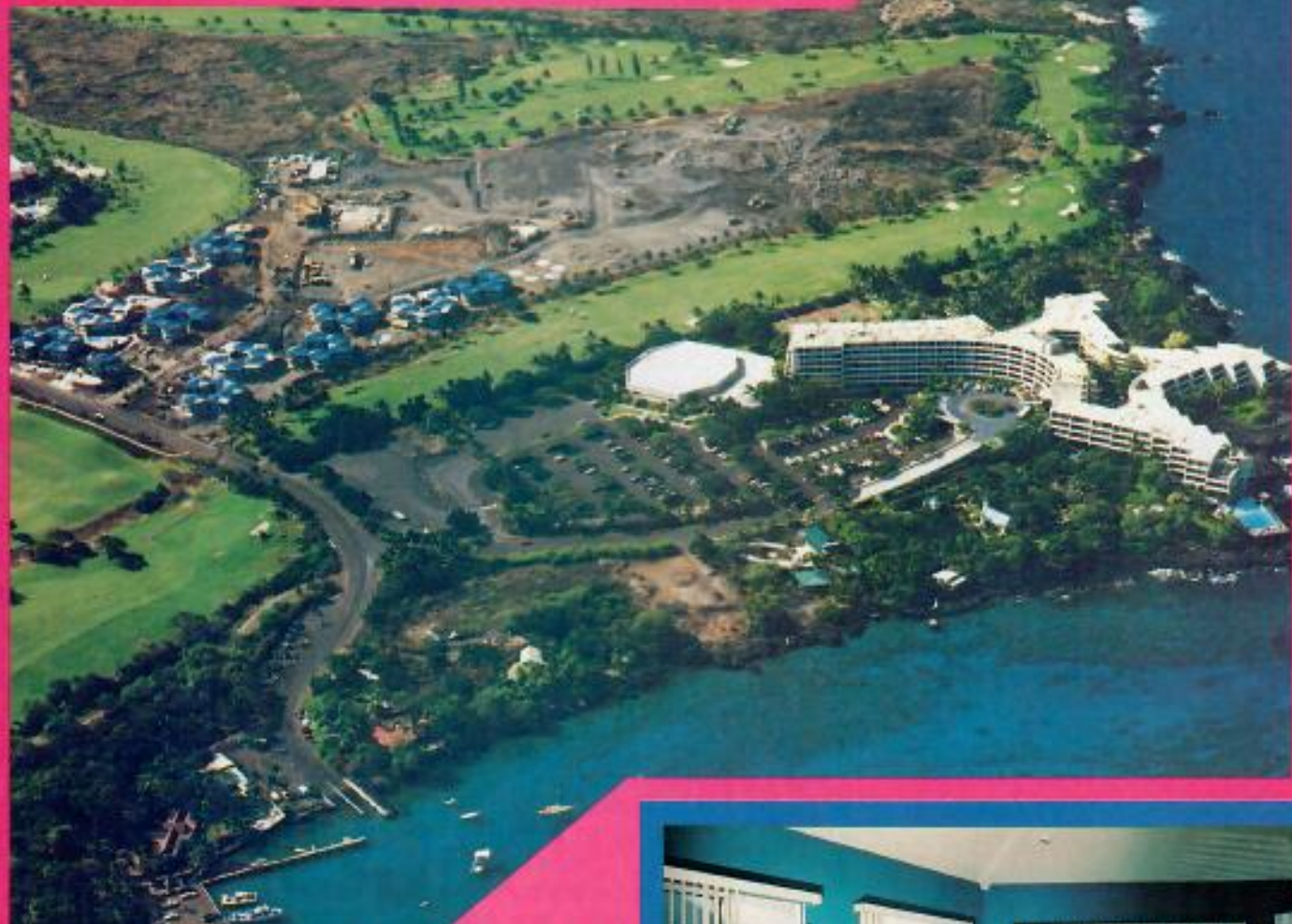
they have gracefully survived economic change as the fields of cane have made way for spreading macadamia nut orchards. Many residents also work in the south coast fishing industry or drive up the Kona Coast to work in the resorts. (Plans for a large resort seven miles west of South Point, complete with airfield and marina, have both supporters and detractors in the Ka'ū community.)

Nā'ālehu, the southernmost town in the U.S.A., is a great place to pull off the road for refreshment. The Nā'ālehu Coffee Shop has been serving unpretentious homestyle cooking since 1941. The Nā'ālehu Fruit Stand offers cold drinks and sandwiches to take out. Sitting in the shade, relaxing with a cold drink after a trip to black sands or ancient moorings, you'll wonder how so many people can just drive right through, never knowing the riches of Ka'ū. ❀



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University of Hawaii at Hilo

DEPARTMENT OF GEOLOGY

January 7, 1991

Mr. George Balazs
NMFS - SFCHL
2570 Dole Street
Honolulu, Hawaii 96822-2396

Dear George,

Sorry it's taken me so long to respond to your letter about the Mani Lani meeting, but with the holidays and all four kids at home, well you know. At any rate, Leon, John Coney and I all attended that meeting. I was the only one foolish enough to open my mouth and point out the "obvious" weaknesses in their methodologies. Such little things as only sampling during half the year or no data taken at night, little things like that. I also recommended that consultants not be hired directly by the developers but from a "pool" managed by the Environmental Center or some such organization. Our esteemed colleagues Dollar, Ziemann, Brock et al. attacked me with a vengeance and to the uninformed may have appeared to have successfully countered each of my comments. All in all a very unsatisfactory experience for me! I left the meeting feeling very frustrated and harboring little hope for protecting the marine environment with those kind of seemingly legitimate scientists but really hired guns in so deep with the developers.

Thanks for your letter - it's nice to know that we're not alone in knowing what's really going on. Some day I hope that we'll be able to carry out routine, long-term monitoring from a lab at Puako and be able to have a good enough database to see what's really happening.

On a happier note, our turtle tagging expeditions continue to be a resounding success. Leon and I recently sent a letter to your boss (you should have already gotten a copy) stating how much these expeditions have meant to our students. Hopefully the letter will help at your end.

Thanks again for your letter and wishing you and your's a happy 1991!

Aloha,
Walt

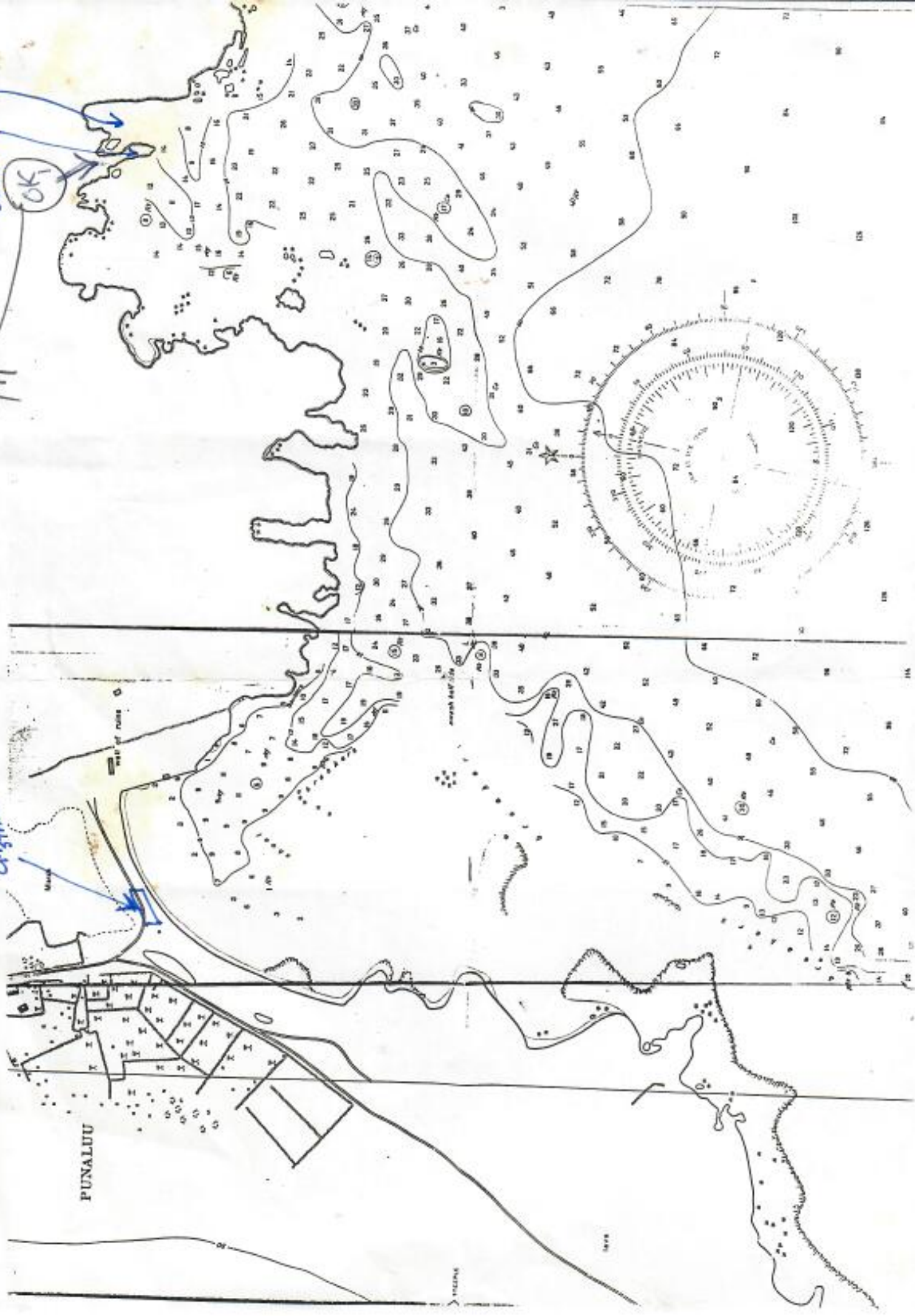
A. L. Howard
5/91

TURTLE BAY??
lookout

OK

Coffin

PUNALIU



May 19, 1991

Dear George,

I thank you again for coming and talk to my first and second graders at Kialehu School. They really enjoyed the presentation and also the handouts.

Enclosed are some thank you notes which the teachers had the children write you and gave them to me to send you.

Also enclosed the map which you wanted Arnold to check it out, he did + marked OK. Keeping envelope to use at another time.

Thank you for reminding me, I forgot, but a piece of Kaula wood is on its way. It needs cleaning and smoothed. It has a crack, the Sun got to it.

Turtle sign still holding its own.

Our vacation starts July 3 to Aug - 3rd - We're not going east this time, only in Ca. Nev. + ^{only} me) Oregon, to visit a son. In Ca. with cousins who will be doing all the planning on where they will take us + etc.

Thanks again,

Sincerely,
Jeanette

Summary of green turtles tagged and resighted
at Punaluu Bay, Kau, Hawaii

by

George H. Balazs

Marine Turtle Research Program, Honolulu Laboratory
National Marine Fisheries Service, NOAA
2570 Dole Street
Honolulu, Hawaii 96822-2396

Study dates	Method of capture	Total no. captured	No. newly tagged	No. tag resightings	Total no. tagged to date	Original and resighting tag dates for turtles resighted at Punaluu
6/76-9/76	SC	42	37	5	37 ^a	
5/7/77	N	3	3 ^b	0	3	
1/20-1/26/78	N, SC, SK	8	8	(1)	11	(8/76)
8/31-9/3/78	SK	10	10	0	21	
7/26-7/29/81	N, SK	7	7	0	28	
11/26/83	SC	3	3 ^c	0	31	
12/15-12/19/83	N, SC, SK	12	10	2 ^c	41	8/78; 11/83
1/8-1/10/84	N, SC, SK	13	9	4	50	1/78; 7/81; 12/83; 12/83
2/17-2/19/84	N, SK	12	10 ^d	2	60	8/78; 1/78
3/23-3/28/84	N, SC, SK	30	20	10	80	1/84; 1/84; 1/84; 2/84; 9/78; 11/83; 1/78 and 2/84; 8/78; 12/83; 8/78 and 12/83
4/13-4/14/84	N, SK	3	2	1	82	12/83-1/84-4/84
5/14-5/17/84	N, SK	11	7	4 ^e	89	2/84; 1/84; 3/84; 2/84

Continued. -- SUMGRT-6.GHB

Study dates	Method of capture	Total no. captured	No. newly tagged	No. tag resightings	Total no. tagged to date	Original and resighting tag dates for turtles resighted at Punaluu
6/26-6/29/84	N, SK	13	8	5 ^d	97	2/84; 2/84; 1/84; 1/78-2/84-3/84; 12/83-1/84-4/84
3/23-3/25/87	N	7	5	2	102	3/87; 3/87
3/21-3/23/88	N	3	3	0	105	
4/10-4/12/89	SK	14	11	3 ^f	116	12/83; 1/84; 9/78
4/9-4/11/90	SK	12	8	4 ^s	124	12/83; 1/84; 3/88; 9/78 and 4/89
7/18/90	SK	12	5 ^h	7	129 ⁱ	4/90; 4/90; 4/89; 2/84; 3/88 and 4/90; 11/83 and 3/84; 1/84 and 4/90
11/27-11/28/90	BN, SK	17	5	12 ^{k,h}	134	4/90 and 7/90; 7/90; 4/90 and 7/90; 4/89; 12/83 and 4/89; 4/90; 4/89; 4/89; 1/84 and 4/90; 4/89; 12/83 and 4/90.
4/23-4/24/91	BN, SK	20	4	16	138	7/90 and 11/90; 4/90-7/90-11/90; 4/89 and 11/90; 12/83-4/89-11/90; 4/90 and 11/90; 11/90; 11/90; 12/83-4/90-11/90; 2/84 and 7/90; 4/90; 4/89 and 7/90; 4/90; 9/78 and 3/84; 4/89; 4/89; 11/83-3/84-7/90

Continued. --SUMGRT-6.GHB

Study dates	Method of capture	Total no. captured	No. newly tagged	No. tag resightings	Total no. tagged to date	Original and resighting tag dates for turtles resighted at Punaluu
7/16-7/17/91	BN, SK	15	3	12	141	--
11/12-11/13/91	SK	24	8	16 ^d	149	--

N = net; BN = beach net; SC = hand capture while scuba diving; SK = hand capture while skin diving

^aMonel alloy tags. All other tags used are made from Inconel 625 alloy. "Total no. tagged to date" was computed separately for Monel and Inconel.

^bTagged turtle 5008 (8165) resighted 6/19/84 nesting at East Island, French Frigate Shoals.

^cTagged turtle 6711-13 resighted 7/9/86 nesting at East Island, French Frigate Shoals.

^dIncludes tagged turtle 7634-37 with four leeches, leech eggs, and likely small tumor in corner of right eye.

^eAlso includes tagged turtle (6182, 6242, 6260) originally tagged nesting at East Island, French Frigate Shoals, 6/82 and 8/82.

^fAlso includes tagged male (3041, 6164, Y205-06) originally tagged basking ashore at Whale-Skate Island, French Frigate Shoals, 5/4/79. Resighted at same location 6/79, 6/80, and 6/82.

^gAlso includes tagged male (6360-61, Y650) originally tagged basking at Tern Island, French Frigate Shoals, 11/28/82.

^hIncludes tagged turtle N388-89, N537 with small tumor in corner of left eye.

ⁱN376, N377 not included in total. This turtle, rescued by Jerome Jude early July 1990 off Kona, released at Punaluu 7/17/90. Straight carapace length 19.8 cm.

WS

Students help tag sea turtles

Twenty-seven students from the Hawaii Preparatory Academy captured and tagged 62 green sea turtles at Kiholo Bay recently. The program is part of a project being carried out in cooperation with George Balazs of the National Marine Fisheries Service in Honolulu. The green sea turtle is a protected species under the U.S. Endangered Species Act.

Students reported that the turtles ranged in weight from 18 to 98 pounds and appeared in healthy condition with no signs of the fibropapilloma disease that has seriously afflicted other segments of the green sea turtle population elsewhere in Hawaii. One of the turtles was a hawksbill, also a protected species, the first to be recaptured at Kiholo. The recapture is expected to help researchers gain information about the growth rates of the hawksbill in Hawaii. It also indicates that they are protected under federal and state law.

Students also use the information in class projects. From the ongoing project, it is becoming more apparent that Kiholo Bay and its attendant lagoon is an important and perhaps the sole habitat for a population of 200-plus green sea turtles and a small number of hawksbill turtles. To better inform the public of the presence of these two species of sea turtles, signs have been placed in the area stating that they are protected under federal and state law.



The special adventure High School Junior team won the "Most" during the 5th annual Big game held recently. The team in the day land navigation on the top three in the rope team members are (front to back) commander Clarence off (holding trophy), Konoa ch Cha-Cha Thompson and mogila and Assistant Coach members of the team but photo.

Students honored

held an awards assembly on Feb. 10. awarded Honor Roll certificates for the school year:

Cabico, Shayna Carver, Andria, Alicia Dinson, Heather Eastwood, Paul Galvez, Tiffani Hakes, Jade, Sashia Kalama, Indar Lange, Sasha Naymon, Orlia Pajimola, Kaluhine Villoria; Sara Wilson, Neilanna David Ayson, Jill Benson, Donnia

Kona Bowl Proudly Announces

The First Roll-Off Winner!

Cliff Madawl won the Paradise Rent to Own "Bowler of the Year" Scratch Classic. In addition to cash, Cliff won his choice of a 20" color TV, VCR, portable stereo with CD player or a microwave oven! Plus, he qualifies for the final "Bowler of the Year" title in December, cash and a Zenith 26" Big Screen Color TV, courtesy of Paradise Rent to Own.



Changing Tides is a monthly news publication by students of the University of Hawai'i at Hilo Marine Option Program (MOP). The opinions expressed herein are not necessarily those of MOP, or of UH-Hilo, but those of the *Changing Tides* staff and contributors. *Changing Tides* welcomes editorial contributions or comments.

SEPT 92
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Advisor: John Coney, MOP Staff
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Turtle Tagging At Punalu'u

Last spring, Marine Options Program (MOP) students captured 20 turtles in the second of MOP's twice-yearly turtle-tagging project at Punalu'u Bay under the direction of George Balazs of the National Marine Fisheries Service (NMFS). The trip was called a success as 19 of the 20 turtles caught were previously tagged, providing a consistent base of information. MOP will again be going turtle tagging this fall, on Nov. 17-18.

People came from Maui and O'ahu to help with the project, which MOP has been doing cooperatively with NMFS for nearly a decade. Balazs' goal is to learn more about the diet and movements of green sea turtles (*Chelonia mydas*) in Hawaiian waters. Most of these cooperative

efforts have been located at Punalu'u Bay, on the southern coast of the Big Island. This has been a particularly rich turtling ground, probably because of the dense *Pterocladia* growth on the inshore rocks of the bay [*Pterocladia* is a red seaweed frequently consumed by green turtles in Hawai'i].

The recent trip went well; all turtles were hand captured using the snorkel method, and all the work was accomplished during the day. However, there was one evening side trip after dark, to a tidal pool near Ninole Cove. There, with three teams in the water, two small 20-pound honu keiki were found which had not previously been tagged.

In spite of some rain, the camping was great. Dinner consisted of hot dogs and hamburgers, with a change to coffee, muffins and fresh fruit for breakfast. Under the able direction of Dr. Hallacher, everyone that wanted to get into the water did, and Dr. Tissot caught his first turtle.

Doug Poteet and Terry Reissen showed up late on Doug's motorcycle. They were first noticed pushing the hog through the sand after it died upon reaching Punalu'u (a broken battery ground).

Noreen Parks, a free-lance writer, showed up to interview Balazs for an article in Hawaiian Airlines magazine. Turtle tagging is apparently attracting widespread interest!

It must be said that everyone missed Dr. Dudley, who was at home sick with the flu.

The NMFS investigation requires that green sea turtles be captured, tagged, and released unharmed. Usually, catching of turtles is done by hand during daylight hours by one of two methods. The first involves the use of two-person teams. Assigned teams try to catch turtles by hand by swimming slowly up to them and grabbing them by their front flippers. Once grabbed, the turtle is quickly rolled onto a float in an upside-down position and brought to shore.

The second daylight method involves deployment of a beach seine (large net). Turtles encompassed by the net are grabbed by hand and brought to shore. The turtle is laid on its back, which prevents it from struggling and becoming stressed from trying to crawl away.

Sea turtles can safely stay out of the water for many hours, as long as they are kept cool. Turtles are susceptible to overheating since they can't physiologically regulate their body temperature, so beach personnel keep the turtles damp, thereby promoting cooling by evaporation.

Once caught, a thorough examination of the turtle is conducted to record body weight and various measurements, and to apply small identification tags to the flippers. Sometimes a small sample of a turtle's stomach contents is collected for later analysis, then the turtle is released.

From this research more will be learned about the growth rate of these turtles, where they travel to, and how often they breed. In Hawai'i, it takes an average of about 25 years for a green sea

turtle to reach an adult size of 150 pounds or more.

At present there is no reliable way to tell the exact age of a particular turtle, and no one knows how long green sea turtles live. However, if they take 25 years to mature, it's likely they live for many decades more.

Most of the turtles caught by MOP/NMFS at Punalu'u are immatures (25 years or younger). Adults lay their eggs on French Frigate Shoals, an isolated reef with several small, uninhabited sandy islands located 500 miles to the northwest of Honolulu.

Turtles are gentle vegetarians that eat only seaweed. The only natural predator of a mature sea turtle is a large shark. However, they are illegally speared, drowned in gillnets, hit by speeding boats and perhaps poisoned by ocean pollution. All sea turtles in Hawai'i and elsewhere in the United States are protected under the U.S. Endangered Species Act.

(Editor's note: The next Turtle Tagging will take place Nov. 17-18. This activity requires persons to sign up at the MOP office [limited space available], please sign up early!)

Alumni Update: Skip the Man by Jan Marie Nelson

This interview was accomplished by mail, all the way out to Saipan where we reached Steven Skipper, better known as Skip. Skip majored in environmental studies, which is liberal studies with a concentration

on water quality. He graduated from UHH in May, 1991 and received a MOP Certificate for his work in water quality assessment. Skip, interested in marine science since he started surfing, said that, "As a conservationist working terrestrially, I have always felt that conservation work done well on the land ultimately protects the ocean".

At this time Skip works as a soil conservationist with the United States Department of Agriculture. He is involved in agricultural land use and conservation planning and application. He assists local land users such as farmers and ranchers, as well as different units of the government, in reducing soil erosion and protecting water quality and quantity. He does this through conservation practice as well as conservation education. He feels that what he does is as relevant as "people in a predominantly materialistic, trendy, and self-centered society let it be!"

Skip's thinking about this topic goes like this: "Conservation is soon to be (sheik yer bootie) chic. Ten-second spots in beer commercials showing 'studly' guys and 'foxy' babes picking beer cans out of a stream will subliminally infuse the masses with a hip, new, chic, avant garde awareness of the relevancy of recycling and conserving!"

Sounds about right to me. Chic or not, it seems like such a vital concept that it doesn't matter how people get to the idea, as long as they get into it.

Skip found his assignment in the southwestern Pacific exciting. He did an island resource assessment in the Commonwealth of the Northern Marianas Islands,

specifically Tinian and Rota.

Two hundred fifty thousand troops were stationed at Tinian during World War II, and the first nuclear bombs ever used were aboard the B-29, *Enola Gay* that took off from that island. In spite of its being devastated during the war, Tinian still supports diverse coral reefs.

Rota, on the other hand, was untouched by the war. Besides having diverse coral reefs, Rota also has unique native limestone forests. Skip comments that he was happy to travel to this remote place and have the opportunity to help the people there plan the islands' future use and development, while protecting their natural resources. He hopes to address the people's concerns through conservation recommendations and federal conservation assistance, and affirms that this was a very challenging assignment. It necessitated him listening to the concerns of all types of people about cultural resources, coastal resources, and fish and wildlife.

Skip says that the frustrating part of his job is the buggy computer system, and he really misses MOP Staff Coordinator John Coney's computer wizardry that we all appreciate here at the MOP office. What captivates Skip in this work is the potential to create positive change by helping even one person to "plant one tree, or to tell someone how to prevent one pound of soil erosion on his/her place, or to turn someone on to a better, softer way to farm or develop resources".

Involvement in this work began for Skip in 1977, when he obtained



Changing Tides



UHH-MOP Fall Activities Tentative Schedule

October 4
First Aid & CPR class.*

October 8
Fish Id. Workshop. LS-15,
4:00-6:00 pm.

October 10
Get the Drift and Bag It!
Annual Marine Debris Pickup.

October 15
Invertebrate Id. Workshop.
LS-15, 4:00-6:00 pm.

October 17
Sailing on Hilo Bay.*

October 22
Coral Id. Workshop. LS-15,
4:00-6:00 pm.

October 29
Limu Id. Workshop. LS-15,
4:00-6:00 pm.

November 7-8
Camping near South Point. *

November 17-18
Turtle Tagging at Punalu'u. *

December 3
QUEST Id. Entrance Exam.
LS-15, 4:00-6:00 pm.

December 9

MOP End of the Semester
Celebration. 4:30-7:00 pm.,
Location to be announced.

Stay tuned for further entries in the
MOP activities calendar...

*Sign up for these activities at the
MOP office.



QUEST

QUEST, or Quantitative Underwater Ecological Surveying Techniques (BIOL/GEOL 264), is a marine science course offered in the summer at UH-Hilo that teaches students commonly used nearshore underwater ecological surveying techniques. This knowledge is then applied in the field using scuba as a research tool to survey the coral reefs off Puako, here on the Big Island.

In addition to the usual Marine Option Program (MOP) faculty and staff, last summer the founder and president of Ocean Graphics, Mr. Norbert Wu, an underwater photographer and author, lectured on underwater photography. His current books in press are, *Life in the Oceans* and *Beneath the Waves*.

Mr. Wu has participated in numerous scientific expeditions throughout the world, including Antarctica, and has served as underwater photographer aboard the Cousteau vessel, *Calypso*.

Last summer's session offered a course in Advanced QUEST (BIOL/GEOL 364). Students enrolled in this class completed the basic QUEST with at least a "B" grade, and were assigned as dive team leaders. In this leadership role, advanced QUEST students worked with the diving safety officer to monitor the safe diving practice of their team members and supervise the team's collection of data in the field, as well as its reduction and analysis.

MOP members from UHH included Mike Childers and Dave Rose, who participated as QUEST staff. Also enrolled in the basic course last summer from UHH were Tammy Wenham, Yuko Okano, Terry Reissen, and Jerry VanEpps.

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an Associates Degree in Agriculture from Maui Community College. That led to work for the college and then, in 1978, Skip went to work on Moloka'i for Hawaiian Homelands on agricultural start-up projects. Based on this previous experience, Skip was then hired by the Soil Conservation Service where he now works.

Since Skip was already working at this job while in classes at the university, he can't say that the class work helped him get the job. However, Skip says that because of his work, he chose classes that would enable him to be a more well-rounded conservationist and land-use planner.

While at UHH, Skip participated in as many MOP activities as he could manage to attend, including the Skill Project Symposiums of '88, '89, and '90, where he says he had wonderful experiences. He recalls that the camping trip at Ke'alu'alu by South Point was excellent due to the "all around perfection of surf, sailing, snorkeling, and epic jam sessions". He also talked about Road to the Sea being the best "gear-grinding, belly-scraping, muffler crunching, four-wheel drive event in the history of vacuum hoses".

Skipper feels that his experience at MOP significantly ties into his work in coastal resources and water quality. MOP not only gave him great memories, but also provided him with valuable research experience. MOP gives people what they make of it, and Skip feels that the opportunity to work with Professors Dudley and Hallacher is excellent. As Skip adamantly states, along with the doctors' plethora of aquatic and

maritime knowledge, MOP has a state-of-the-art computer system manned by Coney.

Also available through MOP is the use of the latest in submersible video technology, complete with up-to-date dryland editing capability. Skip also mentions the advantage of being able to culture some very interesting stuff in a high-tech lab run by the former Stanford wiz kid- now master cloner- John Scott. According to Skip, these opportunities are unparalleled and not to be missed!

"Litteraly" Bugged

by Dave Rose

Pollution is not a new environmental concern. Evidence of human society and discarded by-products of industrialization are painfully present in even the most remote corners of the Earth and beyond into the universe in which this planet is a mere speck.

Of concern here is macro pollution in tide pool environments. According to *Hawaii's Shoreline* (1965), on the Big Island of Hawai'i there are 305.5 miles of shoreline, of which 224.7 miles are inaccessible or marginally accessible to all but the heartiest coastal explorer due to the ruggedness of the topography. Of the remaining 80.8 miles of accessible coastline, most (54.7 miles) is composed of bedrock and only 16.4 miles of the Big Island's coastline boasts sandy beaches (these figures were determined before the loss of Kalapana and Kaimu beaches). More recently, *The State of Hawaii Data Book* (1991) reports 266 miles of general coastline on the Big Island,

including 194 miles of sandy shoreline, of which only 1.2 miles were considered "primary" or "safe, clean, accessible and generally suitable for swimming". Aquatic recreational facilities and resources reported in *Data Book* (1988) was five miles of beach and 35 miles of wild shoreline for the County of Hawaii. Again referring to *Hawaii's Shoreline* (1965), the use and distribution of the Big Island's 305.5 miles of shoreline was as follows: 206.3 miles open land, 32 miles national park, 23.7 miles agriculture, 11.8 miles conservation, 11.5 miles urban, 9 miles public park, 7.5 miles industrial, 2 miles military and 1.7 miles resort. It may be speculated that there has been an increase in usage for urban and resort purposes resulting in a decrease in open land.

Regardless of the specific statistics, the point is that most of the Big Island's coastline is harsh and forbidding and only a small fraction of the remaining shore is maintained for recreational purposes.

For many people, the few governmentally maintained parks are adequate for recreation, providing access and amenities such as parking, running water, picnic facilities and rest rooms. In addition, designated parks provide, for the benefit of beach-goers and the environment, receptacles for rubbish and regular removal of rubbish (unfortunately, a lot of rubbish doesn't make it into the receptacles).

To some individuals, however, the structured ocean park is not adequate. Whether it be to pursue less "fished-out" waters, to escape

On Matters Maritime

Punalu'u Shoreline Changes

by Kiko Johnston-Kitearow

Happy New Year! In Hawai'i the new year is marked by the rising on the eastern horizon (at sunset) of the constellation Makali'i. This tiny, tight cluster of stars is also known in Greek as the Pleiades, in English as the Seven Sisters and in Japanese as Subaru. Should you wish to find it but aren't sure what the shape looks like, consult the grille ornament of the Japan-built auto of the same name.

Last month I was asked to write a monthly column on matters maritime. Two days before deadline, I suggested reprinting my 1991 article on canoe building (December *Ka'u Landing*). Now I hope to have a more ordered series including oceanography, geology, landings, water safety and more how-to-build articles — fishing boat, kayak. Also history.

In any of these areas a writer trying to pass on information to readers unfamiliar with the subject risks being corrected by those more familiar with the subject. I welcome this. Often, especially in matters of history, one tries in vain to find people who know about a place. But soon after writing, "The mooring buoys for ships at Honuapo were here, here, and here..." I was deluged by folks saying, "No, they were like this, and I saw them," and I found my sources.

In this month's column I will risk commenting on how I think

in the future. The forces at work similarly affect other parts of the coast of Ka'u.

One good source is nautical charts. These are updated regularly by two main methods: (1) formal government surveys by the National Oceanographic and

Atmospheric Administration (NOAA), and (2) corrections and observations sent in by mariners and other observers.

A grounded vessel in a harbor channel that became shallower due to silt deposits gets its captain's attention and

NOAA gets notified, whereas a sugar mill stack that is no longer there can remain on a chart for years as no one bothers to report it.

Harbors that have fallen into disuse also are not often surveyed.

Reproduced here is Chart 19992 corrected to June 25, 1977, showing Punalu'u Harbor. The underwater portions are about the same, but the shoreline shows some features from before 1971, others from before 1963. I have a feeling some are older, but will have to wait to hear from readers on these.

Note the area labeled "marsh" surrounded by a dotted line. In the early part of the last century, it must have been a pond, for in the aftermath of the 1868 earthquake and tsunami we find a writer lamenting that the pond of Punalu'u was no more. However, it must have been restored, whether by nature or people we don't know, for in the later part of the last century there is a record of a channel being cut through the beach near today's boat launch ramp for the purpose of floating 11-ton mill gears in from a schooner anchored outside Punalu'u on a scow (a flat-bottom square-ended vessel) to unload in the placid waters of the pond. One hopes it was a rare quiet day at sea as well.

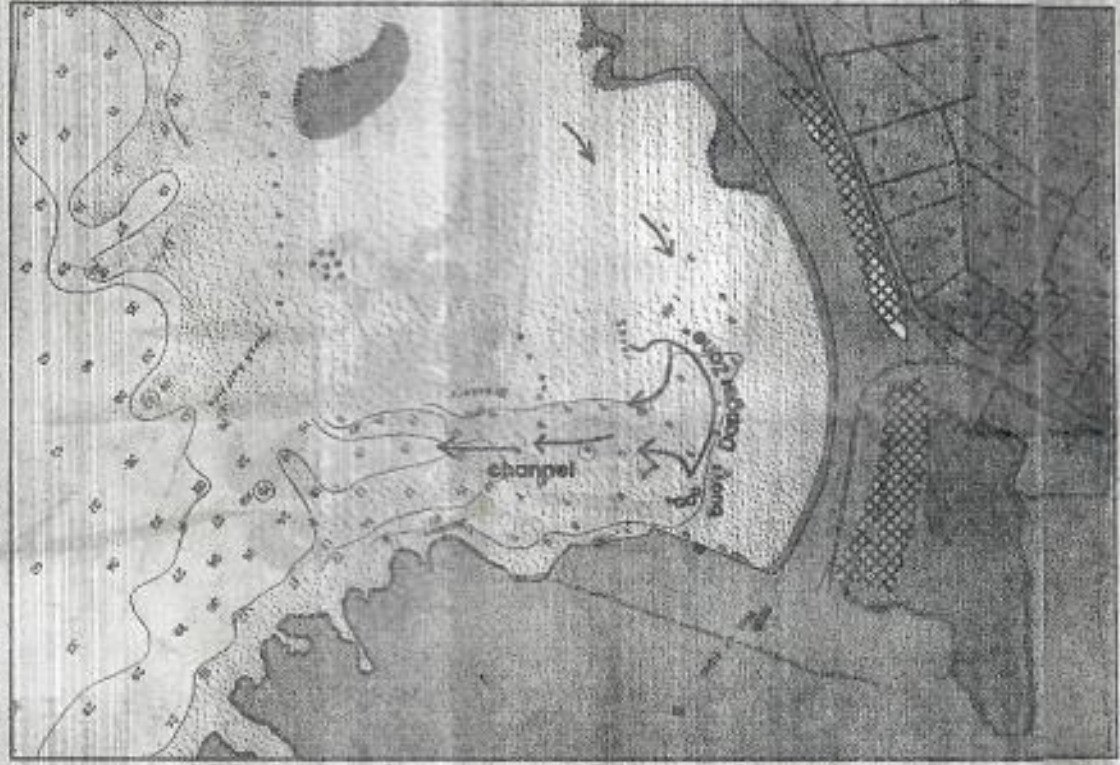
By the time this writer was a child in the 1960s, the pond was a reed marsh. The reeds and

rant construction. The coconut trees on the beach between the pond and the sea were planted at that time by Girl Scouts, according to one source. In 1975 a tsunami washed over the beach, flattening it and washing away the footbridges in the pond. One of the laminated wood arched beams washed up at Ninole.

The beach has moved inland by about its own width from the position on the chart and the line of the seaward edge of the beach today is where the landward edge was on the chart. Along the beach road, the present seaward edge of the beach is about where the pond's seaward edge is shown on the chart, and the back edge of the beach would be about the mauka edge of the road were it not for the county road crew's efforts with a front-end loader after every high surf period.

The springs that formerly fed the larger of the two oval ponds now carve ravines back into the beach at low tide during calm periods. In front of today's lei stand, the receding beach has exposed a broad pass or shelf of rock where the small square is on the chart.

During the very impressive surf from Hurricane Fernanda, waves washed over the entire stretch of beach from the boat ramp to the lei stand into the pond. The sand carried by these overtopping waves advanced the pond shore inland about one foot.



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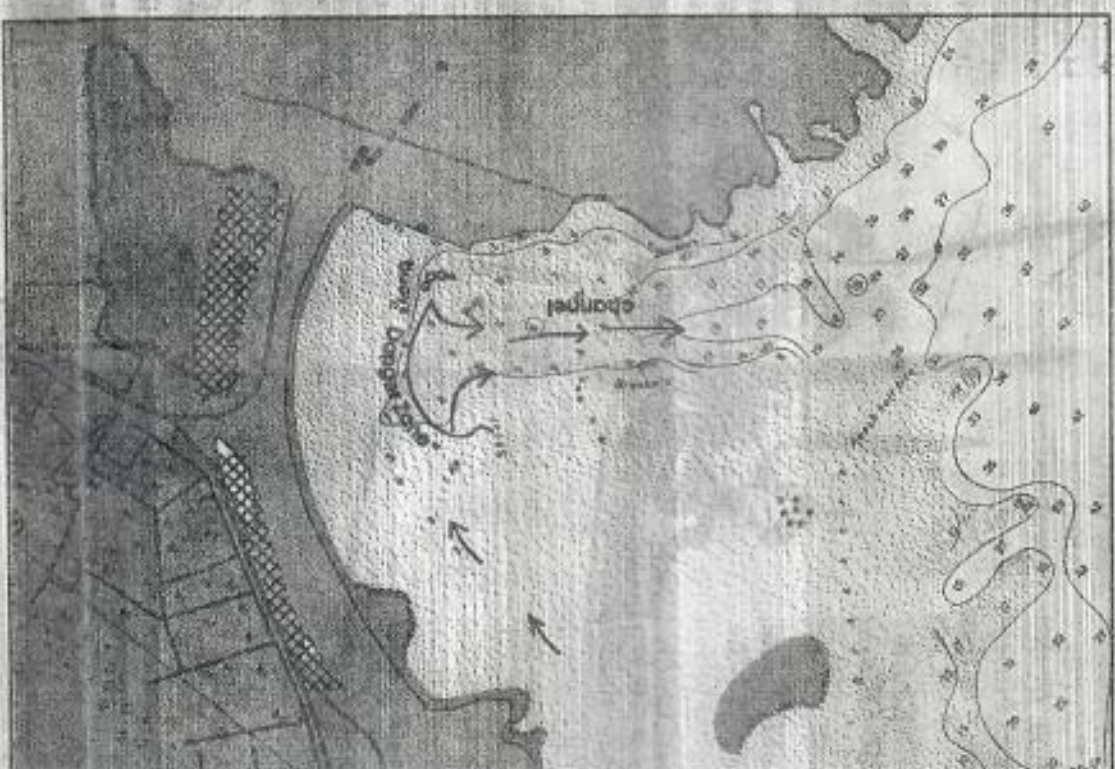
In this month's column I will risk commenting on how I think the shoreline at Punalū'u has changed, some possible reasons why, and ways it might change

in the future. The forces at work similarly affect other parts of the coast of Ka'u.

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Atmospheric Administration (NOAA), and (2) corrections and observations sent in by mariners and other observers.

A grounded vessel in a harbor channel that became shallow due to silt deposits gets its captain's attention and



Portion of Punalū'u Harbor, showing how much the beach (currently in the cross-hatched area) has moved since this mapping in 1977. Also shown by arrows is the strong outflowing channel, and the mooring buoys.

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ant construction. The coconut trees on the beach between the pond and the sea were planted at that time by Girl Scouts, according to one source. In 1975 a tsunami washed over the beach, flattening it and washing away the footbridges in the pond. One of the laminated wood arched beams washed up at Nihoa.

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Black sand beaches like

Punalu'u Beach ...

Continued from Page 15

Punalu'u are formed when hot lava entering the sea is pulverized by the sudden cooling. Much of the sand thus formed slides down the undersea slope, but some is carried along the shore by winds and currents and deposited in protected pockets. A prolonged eruption can create a large beach a long distance from the lava entry, as those who saw the formation of Kamoamao beach can attest. Once the eruption ceases, loss of sand from the beach begins. Sand can be washed inland by storm surf or tsunami, blown inland by heavy winds, tracked inland on shoes or car or bus tires, carried off in small amounts by souvenir seekers or larger amounts by landscape crews. Currents can also carry sand out to sea and downslope.

One rumor this writer has heard but has not been able to verify was that at some point in the '50s or '60s a trucking firm was engaged in artificial replenishment of a black sand beach.

Research since the mid 1980s seems to indicate the Island of Hawaii's sinking at a rate of about one quarter of an inch per year or roughly a foot per half century. While some hold that the sea is rising (and it is possible for the sea to rise or fall and more amazingly for the land to rise or sink), sinking land and/or rising sea have the same effect of accelerating the reduction of

Punalu'u beach.

On the chart there are some references to the rocks and reefs marked "breakers" and "awash half tide" having been dry land in the past, as well as reports of coconut trunk roots on the bottom, and even a dwelling on a small *maka* or island. Given four feet of sinkage in 200 years, and the large amount of sand possibly present during an eruption, this is certainly within the realm of possibility.

As for predicting the future, if things continue for a time in a fairly steady manner, the beach will continue to move inland at the expense of the pond and the beach road, which will become indefensible without extreme measures like the rock retaining wall and gravel berm that the county used to keep the road between Kaimu and Kalapana. This is also the method the state Highways Division uses for the bay front highway in front of downtown Hilo. In both cases, waves still come over the road during heavy surf and the presence of a wall seems to accelerate erosion of the sand remaining below it. Such a wall would not be a pretty sight.

If an eruption poured into the sea upcurrent and fairly nearby, much of the bay could become refilled with sand and a wider beach form.

Punalu'u is a bay because previous lava flows have pushed

out into the sea to form the points on either side. A future flow could come to shore between these points and entirely fill the bay. This happened at Kaimu.

Large earthquakes can cause parts of the coastline to subside several feet, leaving coconut trees standing in the sea (Halape and Kapoho) and the sea washing about within church walls (Kalapana).

Finally, the recently discovered (and thankfully, infrequent) submarine landslides can send chunks of the mountain (shoreline included) plunging into the depths, eliminating this writer, and with the splash, most of his readers.

Punalu'u: a changing temporary phenomenon. Enjoy it while it's here.

In closing though we may not know when or how Punalu'u will end, I submit some guidance to help keep you from ending at Punalu'u.

The major hazard to be aware of is the current going out the channel to sea. This channel is toward the left point of the bay (as one faces seaward) between the rocky left point and breakers on the reef. Water flows out through here, often faster than a person with fins can swim. Most of this outflow is water that waves have thrown across the reefs, but spring water outflow and the ebb current of a falling tide contribute.

The usual strategy of swimming to the side of the current is not much help here, as one side is a jagged cliff with pounding waves and on the other, breakers can pound you across jagged submerged reefs. By far the best idea is not to get near enough to the "drain" to get sucked out.

When swimming at the boat ramp end of the beach, stay inside the buoys. When swimming in front of the beach road end of the beach, keeping to the right toward the pavilions is best, as it is against the current inside the reef and if you tire you can swim back with the current.

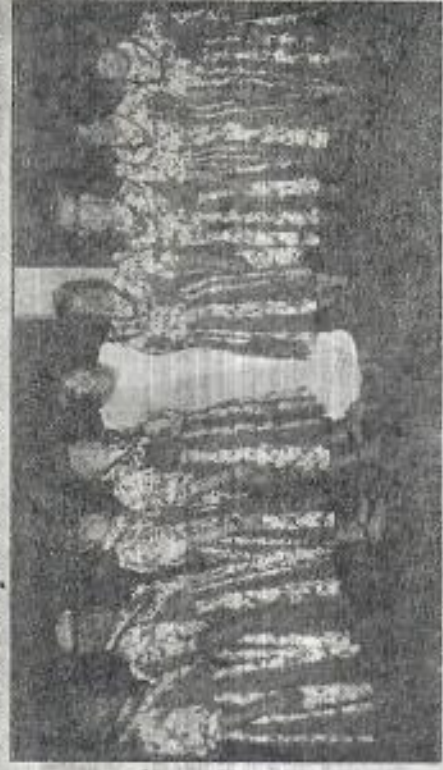
One can also swim between the two parts of the beach within a fairly close distance of the shelf, but watch for shallow spots. If snorkeling, remember to lift

your head and check where you are. Several of the people we've had to pull in said they became so entranced following a turtle that they didn't realize they were in the channel — this, despite having been warned not to go past the buoys.

This advice is for average trade wind conditions. In varying wind strengths or directions, and different wave heights, the current may differ. Remember: "If in doubt, don't go out!"

Finally, if you are so unfortunate as to be swept out, don't be shy. Let it be known you are in trouble. Rest. Stay out of the breakers, and hope someone who knows how to use the rescue board or a canoe will come and get you.

Ka'u Kupunas Dance in Hula Festival



Na Kupuna Waialeale O Ka'u captured a second place award in the November King David Kalahele Kupunas Hula Festival at the Kona Surf. Left to right: Mabel Kaino, Susan Pua, Ginger Harris, Florence Seifridge, Teacher Lorré Lei Sienakua, Hattie Macomber, Mae Akonui, Annie Wong-Yuen, Jaumele Howard.

OPINIONS

Reader Shares Punalu'u Memories

Dear Editor,

A hearty thank you to Kiko Johnston-Kitazawa for the article, "Punalu'u Shoreline Changes," in the January issue.

The article brought back many childhood memories of nearly 66 years ago. I was one of six children (at the time) of William and Mary Kuanoni; however, only three lived in Punalu'u, while others were *hamai to tutus* and *Kuku nui*. A baby sister was born later in Hilo. I was called Sonny by all. Our house was located left and just short of the stop sign when leaving the beach. Families living there were:

1. Across the street from us, Hoopai, with two sons, Edward and Donald.

2. Back on our side of the road was Mama Nui Iona and grandkids Haaheo and Kapeka.

3. Next, Punahoa, and son Fred, a renowned slack key guitar player throughout all of the islands.

4. Then Uncle Boy Lohiau, and daughter Mahana.

5. By us, Doctor Beamer and daughter, who adored Mama Nui and her Tokay wine.

Down the road towards Ninole, the Akius. Mr. Akiu was totally blind, but was able to sense anyone or anything approaching him. Mrs. Akiu was pastor of the village church. Living with them was a Willie Wright, who kept to himself mostly, and the Akiu grandkids, Henry and Jeanette Bouchard (Jeanette Howard, owner of the present lei stand).

7. Finally, the Bangays, Lani, Pele, Joe (Toa), Virginia and Chris. Mr. Bangay was a canoe fisherman.

8. In Ninole, one family comes to mind, Kakutani, with daughter Nellie.

Others I may have missed, forgive me!

At the very end of Ninole, where Sea Mountain pro shop is located, lived a family and the last *ali'i* of the area. When he died, there was a solemn procession for his burial, led by *ali'i* from all over the Ka'u district, families, friends and everyone from both villages. The site was in the *a'a* south of Ninole. A large cave was uncovered. In it were other *lauhala* wrapped bodies with their favorite belongings — spears, canoes or whatever.

What a wonderful life I had in Punalu'u. Prohibition meant nothing to us kids. When not occupied with chores, we'd play the usual games, but mainly we liked to fish — spear, *kamakoi*, throw net, *hukilau* or *hapai woa* when the *opelu* or *manpachi* canoes returned. Help beach the canoe and you had a share of the catch. Pick *opihii*, *limu*, *a'ama*, dive for *wana*. Fruits were nice — guava, mango, banana; from the mountains by horseback, rose or mountain apples, *waiuwi*, *lilikoii*, tamarin and of course the main staple, *taro*, for *poi*, sweet potatoes and greens from young shoots of certain fern, *taro* and others of which I can't recall. Gather *kukui* nuts to roast and make *ilimona*, rock salt to preserve fish, raw or dried. *Opai* was

gathered from the Hamakua side.

Speaking of *kukui*, we used to walk the seven miles to Pahala to the movies. On our return, we would run through a *kukui* grove, afraid of the Obaki (*kepelo*).

I remember those ponds mentioned. The smaller of the two was used by village ladies to do some of their laundry. The larger pond had a board walk across it from northwest to southeast for the people who worked in the office, a large single-story building north of the bridge. Sugar was transported from Pahala and surrounding areas by rail to be loaded on ships anchored off Punalu'u. (All this, of course, was before my time.) This building and Doc Beamer's were the only two that had electricity — gas-fired generators.

There was another fresh water pond about 250 yards east of the present boat ramp in a small vale. I believe water was pumped out to quench the thirst of the workers.

The sand dunes and the shoreline were quite high. The sea floor from the present boat ramp area and short of the wharf location was filled and flattened with rocks to prevent excessive wave action when loading sugar on smaller boats for delivery to their mother ship.

Many more precious memories were revived by your article. *Mahalo no ka 'aina!*

— Clement Kuanoni

↙ Longview, Washington

Regulate Tourist 'Flightseeing

Dear Editor,

Representatives of two of the 13 statewide community and environmental groups who filed a formal petition with the Federal Aviation Administration (FAA) in January sounded an alarm on March 16 about the fourth tour helicopter crash in less than one month here in Hawai'i.

Representatives of Citizens Against Noise and the Tour Aircraft Control Coalition pointed to the four most recent tour helicopter crashes — three on the Big Island, and two of which occurred within six days of each other — as evidence that the industry remains completely unregulated by the FAA, and that the federal government must act swiftly and decisively on the petition request for stricter federal aviation regulations to insure the continued safety of tourists in Hawai'i who choose to sightsee by air.

The Sierra Club Legal Defense Fund presented the citizens' plea directly to the FAA in Washington, DC, and at the January 1994 FAA hearings held on O'ahu, Kauai, Maui and the Big Island, on the issue of tour aviation noise and safety concerns.

We believe several specific requests in our petition will improve safe operating procedures by the flightseeing industry in Hawai'i; namely, higher altitude and standoff distances, stricter pilot certification requirements, and instrument flight ratings for all pilots.

"The public testimony at the

recent FAA hearings clearly demonstrates that residents are fed up with the noise and hazard of aircraft continually flying over and near their homes. Noise pollution associated with high-density, for-profit tours is incompatible with the peaceful enjoyment of our homes, workplaces and recreational areas, including Hawai'i's most special places of peace and respite, our National Parks.

Jason Wineinger, chair of the Tour Aircraft Control Coalition, said, "FAA's swift and judicious action can put an end to the apparent declining air tour safety in our skies. How many people have to be killed or maimed in an intersection before a traffic light is installed? It seems to me that the same principle applies in our skies; once enough accidents occur, rules should be imposed. The parameters prescribed in the Sierra Club Legal Defense Fund petition would significantly improve air tour safety.

— Barry Stokes, President
Citizens Against Noise

Who Profits?

Dear Editor,

Who profits from the proposed Villages at Hokukano, the exclusive, upscale residential subdivision with private country club, golf, etc.?

To begin with, I don't see anywhere in sight the kind of infrastructure needed to sustain the additional burden that such a build-out will require.

Seven Adult Education Graduates Pursue Goals

Dear Editor,

An old African proverb goes, "It takes a whole village to raise one child." Last October, Na'alehu helped to complete the raising of seven of its own (including a Pahala lady) when they got their hard-earned high school diplomas — as adults.

With continued support from the community, we've seen these seven emerge as respected, aspiring and accomplished citizens.

Stalma Ah Yee has been gaining work experience under the JOBS program as office staff with Hui Malama Ola Na 'Oiwī. Soon she will be taking full-time

employment on Maui.

Alohalyn Beck has persevered to get surgical relief for a decade-long pain problem which has inhibited her. Music, hopefully, is her next goal.

Aurea Castaneda, when her Hilo cosmetology school closed, negotiated a one-year apprenticeship with John Turner at his Ocean View Hair Salon. When she's licensed, she can go on her own or join John.

George Gall, having served as interim member of the board helping to found the Ka'u Community Development Corporation, and having put a 10-watt community radio station

(KNAC, 90.9 FM) together, is now poring over college catalogues.

Tammy Makuakane just completed a season with MacNuts and wants to join her husband, Michael, in school at HCC next fall. Michael in Fire Science, Tammy in Accounting. (Michael works at Food Fair part-time and as on-call cook at Na'alehu café.)

Cheryl Torres, class valedictorian, in addition to her craft-making talents, has become an author of children's stories and is in search of a publisher.

As with the tribal rites of passage into adulthood required by

Africans and others, getting a high school diploma signifies to the village, to the world of elders, that a child is able to commit, to pursue, to follow through on these goals which keep the community strong and vigorous, and the individual student a productive and self-confident adult.

Congratulations, Na'alehu. Congratulations, all. As our friend, Jay Hanson, said of Ka'u community spirit, "Just think... if we could bottle this and ship it out, we could cure all of the world's ills!"

— Charlotte H. Donat
Hawi

As things stand now, residents are already contending with overburdened schools, roads, parks, traffic and everything else, thanks in large part to a cool half-billion dollar infrastructure deficit. With population growth continuing unabated, it demands that growth be scrutinized, controlled and yes, even deferred.

Should we be expected to embrace yet another development that leads to ever further urbanization and environmental assault and degradation?

Is this the sort of thing that an investor-driven, megabucks-motivated project will inflict? It's being shoved in our direction.

— Philip C. Hoffman
Kealahou

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Paradise

Hawaii's national parks are

IN PERIL

the front lines in the battle to preserve the Islands' native species



CL. DEAN LEWIS

Turtle crew member gives a helping hand to a hatchling Hawaiian hawksbill. Female turtles who manage to evade predators on the beach and in the ocean will eventually return to this beach in Hawaii Volcanoes National Park to lay their eggs.

AS DUSK DESCENDS OVER A BLACK SAND BEACH IN HAWAII VOLCANOES NATIONAL Park, a volunteer holds a sluggish hatchling turtle in her hand while the monitoring crew logs him in. The warmth of her palm seems to animate the tiny turtle a bit, so she sets him down gently on the sand and watches him flipper his way down to the ocean. With the moon rising in the sky, the crew eventually digs 64 more little Hawaiian hawksbill turtles out of their nest, which had collapsed during a partial hatch the night before. ¶ Those turtles don't know how lucky they are. Three years ago, before the park's new turtle crew began clearing the beach of predators, no hatchlings made it out of the nests alive. Every egg was eaten by mongooses, feral cats, and rats. Like snakes in Eden, these and other alien species are threaten-

ing to wipe out Hawaii's precious few remaining native life-forms. ¶ Due to their geographic isolation, the Hawaiian Islands witnessed an evolution of plant and animal species found nowhere else on Earth—from birds like the shy crested honeycreeper and the gentle nene (Hawaiian goose) to plants such as the hapu'u fern and the 'ahinahina (silversword). Such species hold fascination for hikers, birders, and visitors to the Islands. And they may bear important secrets for scientists, just as the Northwest forests yielded the cancer-fighting drug taxol from the yew tree. ¶ Their isolation has left them vulnerable, however, to aggressive competitors arriving from less-sheltered shores. Some aliens arrived by accident, such as rats on ships; others were brought in intentionally as livestock or nursery plants. Though only a small percentage

By Lora J. Finnegan



RICHARD A. COOKE III



G. HEAD LENSES

have proved harmful to native species, they've wreaked havoc disproportionate to their numbers in a fragile ecosystem.

Many native species are already gone. As many as 150 bird species were once found on the Islands; today only 67 remain, and 31 of those are listed as endangered. Other animals also teeter on the brink of extinction; for example, only about 100 Hawaiian hawksbill turtle adults are estimated to remain in the wild. Plants, too, have suffered: 178 species are listed as endangered, and 28 more will soon be added to the list. In fact, Hawaii has a higher concentration of endangered plant and animal species than any other place in the United States. And at least half of the nation's documented plant and bird extinctions have occurred here.

A gallery of threatened species

Among the Islands' embattled native species are (clockwise from above) hapu'u ferns, considered a delicacy by feral pigs; nene geese, prey to cars and mongooses; silverswords, which may have survived swarms of goats only to succumb to swarms of ants; and 'ohi'a lehua trees, often smothered by invaders such as banana poka.

As native species continue to decline, the battle to preserve them is being waged with a new intensity. Nowhere is the fight more intense than in Hawaii's two big national parks: the Big Island's Hawaii Volcanoes National Park and Maui's Haleakala National Park. The strategies differ, since each park faces a somewhat different gallery of rogues. But at each park, the staff is fired with the dedication of an army defending its homeland: enemy species are targeted, campaigns mapped, forces deployed. This is war.



Hawaii Volcanoes: goose versus mongoose

At 230,000 acres, Hawaii Volcanoes National Park dominates the southeast end of the Big Island, sweeping from lavabound coast to high-montane rain forest. Midway up the mountain, in the dryland forest, protection from predators plays a big role in the effort to bring back the endangered state bird, the nene. The Big Island has one of Hawaii's largest wild nene flocks,



trees, choking them and all that grows underneath. Katahira explains that the vines are banana poka, first brought to the Islands as an ornamental, but now invading the wild. "It can climb to the top of the tallest native koa and 'ohi'a lehua trees—up to 200 feet. The tree dies a slow death." Birds also suffer, since the koa is home to many endangered forest birds and the red blossoms of the 'ohi'a feed others, such as the scarlet 'i'iwi and the red-and-black 'apapane.

Climbing over a short wire fence, we step into a section of the park called the 'Ola'a Forest—and seemingly back in time. Dark, viscous mud oozes over our boot tops as we clamber over roots as thick as a wrestler's arm. A soft green light filters down through the scimitar-shaped leaves of the koa trees overhead. Underneath, hapu'u tree ferns stand tall on bundles of broomsticklike aerial roots. This fern acts as a nurse log for the 'ohi'a tree, which begins on the fern as an epiphyte, then sends its roots to the ground without killing the host fern. Similar tree ferns have existed in Hawaii since the Paleozoic era, yet one particular alien species can decimate a swath of ferns and forest virtually overnight.

"The feral pig is our worst enemy here," says Katahira. "He knocks down the tree fern and chews out its starchy core heart, leaving a watery hollow where mosquitoes breed and carry disease to native birds." Pigs also eat the fruit of the banana poka and excrete its seeds, spreading the plant deeper into the forest.

The 'Ola'a Forest today is lush and healthy because it has been fenced off and nearly pig-free long enough to prove the forest can regenerate if pigs and alien plants are removed. It contrasts sharply with decimated areas where pigs still roam,



PUTER MENSZEL

Warriors of the wilds

Efforts to stem the damage done to natives by invasive species include hunting pigs with the help of dogs and keeping them out with the help of fences (left); spraying herbicides on plant invaders in the rain-forest understory (above); and using beagles to sniff out outlawed fruits, meats, and vegetables in luggage.



reinforcing park officials' fears of a catastrophe in the making. Studies indicate that the situation is a dire one, calling for drastic and sometimes controversial measures.

Since the start of the pig control program, park officials have fenced, trapped, and hunted the animal out of 20,000 acres, where the forest is now recovering. Each month, a ranger walks every inch of the 45 miles of pig fence and repairs breaks. Rangers have another 40,000 acres to fence, but the work is costly—as much as \$50,000 per mile—and the special fund that paid for the project has run dry, putting the project's future in jeopardy.

Haleakala: fighting the black stain

The pig problem has been pretty much solved at Haleakala National Park on Maui. Fencing is nearly complete around critical sections of this complex park, whose boundaries sweep from Haleakala's 10,023-foot summit to the sea coast and whose life zones range from the desertylike crater floor to some of the most untouched rain forest left in Hawaii.

Park officials have scored hard-won victories against voracious feral goats that once swarmed through Haleakala Crater in huge herds, stripping vegetation to the ground. Hunting of feral goats is allowed in various parts of the Islands; here, it was stepped up with the help of a large volunteer force. "The first few thousand were easy to get out," says ranger Ted



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Rodrigues. Eventually, only the wildest goats in remote areas were left. "To find them, we'd release a captured goat with a radio collar. We called him the Judas goat, because he'd go join up with the wild ones and we could track them all."

The silversword, a plant that like looks like a prop from a *Flintstones* movie, is one species that was almost wiped out by goats and vandals. By the 1930s, only a few thousand silverswords remained in the park. Eliminating the goats helped bring the plant's numbers back up to more than 50,000.

Recently, though, a new danger has emerged. At the edge of Haleakala's dramatic cone-pocked crater one windy morning, National Biological Survey biologist Art Medeiros enters a roped-off study site to hunt down some of the spiky plant's new adversaries. A scholarly-looking man notable (in Hawaii, anyway) for his lack of a tan, Medeiros appears eager for the pursuit, hunched over and peering intently at the ground for tracks. It doesn't take long. He spots his quarry under the first rock he overturns: a nest of reddish black Argentine ants—the same type of ant you might find in your kitchen.

"It started off slowly, with just a few colonies in the 1960s," says Medeiros. "Then they began spreading like a black stain. We started to realize that in areas with ants, we found nothing else—no native bees, wasps, flies." He explains how the survival of the silversword depends on the survival of native insects, which pollinate the plants. The ants eat the larvae of these key insects, spelling doom for the silversword, which blooms only once in its 30-year life span, then dies.

Can the black stain be halted in time? "Maybe. Ants have only recently been introduced to the 10,000-foot-level home of the silversword," says Medeiros. "We're working on a bait toxicant. It's unusual because pesticides are rarely used to protect endangered species."

Downslope from the volcano rim, another aggressive alien called the velvet tree, or miconia, is starting to invade the lowland rain forest. In Tahiti, this plant is so pervasive that Tahitians refer to it as *le cancer vert* (the green cancer) and have given up hope of controlling it on some islands. A few of the plants were brought to Maui by a local botanical garden in the 1970s, but their progeny quickly escaped. Now miconia spreads over 2 square miles.

Park officials and conservation officials have instituted emergency measures that they hope will stem the advance. In the first phase, they bombed miconia with spot-sprayers from helicopters. The next phase is a ground assault, pulling the plants up or shooting herbicide into their trunks with injector guns. For a long-term solution, they're looking in its original Central American habitat for creatures that attack it. This technique, called biocontrol, requires time and extensive study, but it holds the possibility for controlling many alien pests.

Hope for the future

Landmark legislation and a new program should aid the efforts to preserve native species. The goal of the Hawaii Tropical Forest Recovery Act is to provide federal funding for innovative programs to rejuvenate tropical forests. A new Alien Species Task Force will be set up to coordinate state and federal agencies' efforts to stop the flow of non-native pests into Hawaii. And by providing matching funds, the new Natural Area Partnership Program encourages private landowners to protect areas containing native species.

In the meantime, the monitoring crew guarding the Hawaiian hawksbill turtles continues to score a victory against extinction each time a nest hatches. As crew members watch the tiny black shells disappearing into the foamy surf, they may be observing the first wave of a comeback for Hawaii's rare native species. ■

Going native in Hawaii

Visitors to Hawaii's national parks can find many ways to become acquainted with the Islands' native species. Here are some suggestions.

Hawaii Volcanoes National Park. Exhibits at the Kilauea Visitor Center illuminate conservation issues. Pick up a park map and a free Halema'uma'u Trail brochure, which offers descriptions of native and introduced plants.

Daily ranger-led walks from the visitor center help you learn more about native species: the Summit Walk is an easy excursion into the rain forest, and the Discovery Walk is a more strenuous hike into a different native habitat each day. You can get a good park overview on your own out along the 11-mile Crater Rim Drive, where you can often spot nene (don't feed the birds). Just off the road, on the ¼-mile Thurston Lava Tube (Nahuku) Trail, you'll see a showcase of native species, including hapu'u tree ferns and forest birds like the 'apapane and 'amakihi. The Kipuka Puaulu (Bird Park) area, off the Moana Loa Strip Road, offers an easy 1.2-mile trail into a native old-growth forest with some of the largest 'ohi'a and koa trees in the Islands; the scarlet i'iwi is often among the 'ohi'a blossoms.

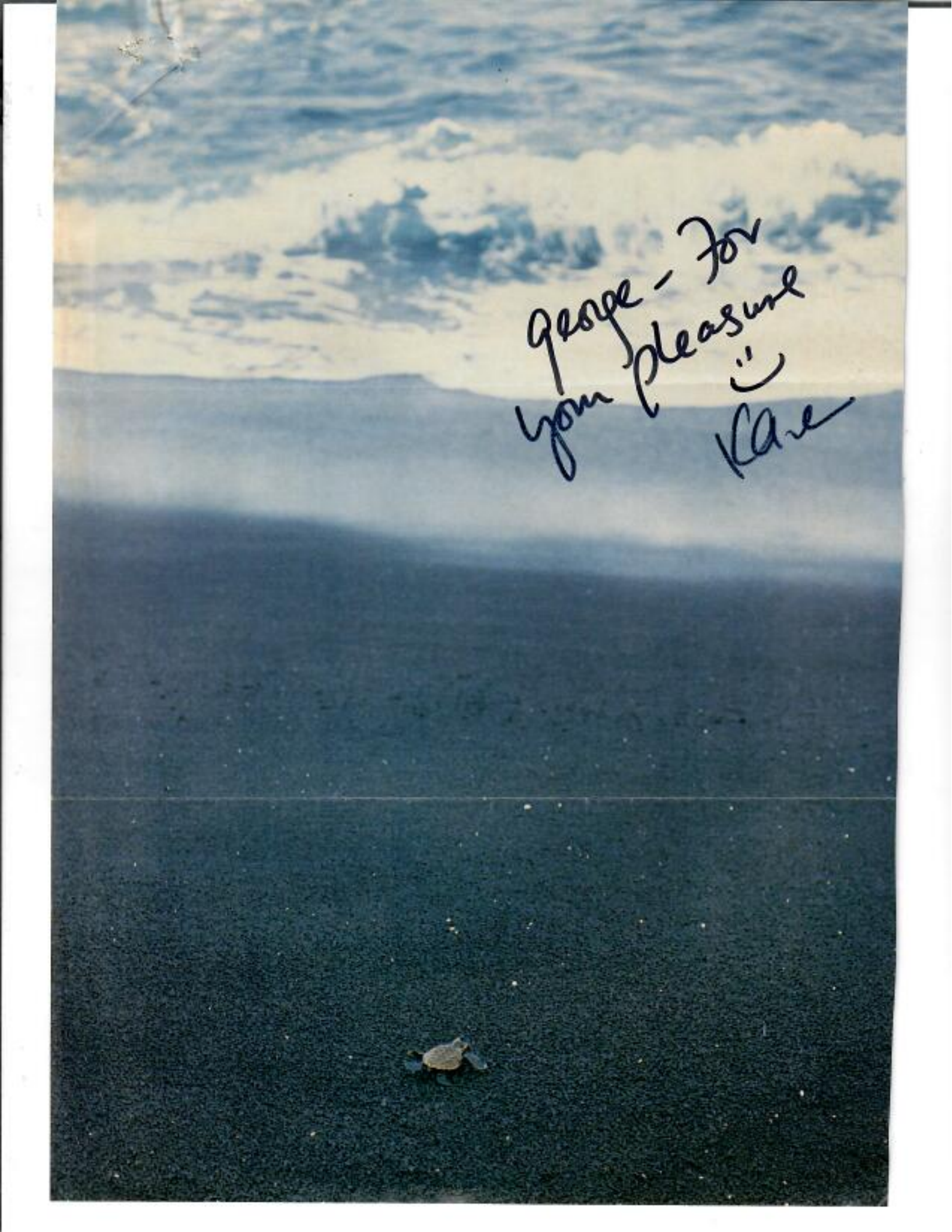
For a longer trek that gives you a look at native species and problem plants (Himalayan raspberry, Kahili ginger), try the 4-mile Kilauea Iki Trail.

Haleakala National Park. Entering the crater side of the park, stop in at Hosmer Grove and walk its easy self-guided nature trail. You'll get a quick education on native and introduced plants in this arboretum-like setting; you may also spot i'iwi, 'apapane, or Maui creepers.

At the small visitor center overlooking the volcano's edge, summit talks are given three times daily on native plants and animals, volcanism, and Hawaiian history and lore. Here and throughout the crater, you may see nene. Moderately strenuous guided hikes down into Haleakala Crater along 1¼ miles of the Sliding Sands Trail are offered twice weekly. For more of a workout, try the 3-mile guided hikes into the Nature Conservancy's rugged Waikamoi Preserve rain forest; these are offered weekly. On the Hana side of the park, the hike into Waimoku Falls is spectacular, heading up into the rain forest of the Kipahulu Valley to views of frothy falls and shimmering pools. You'll see some natives like hala and sword ferns, plus problem plants like bamboo and strawberry guava.

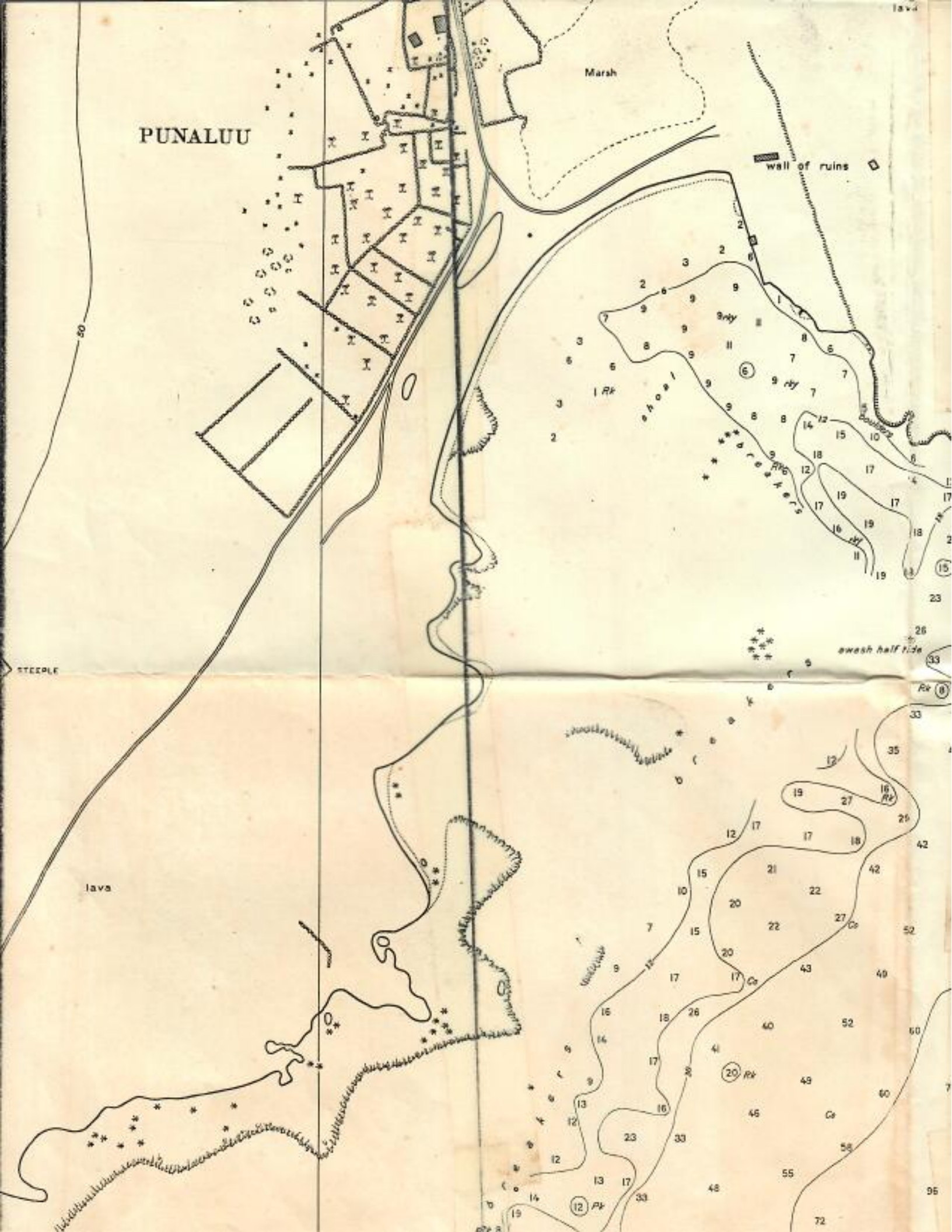
How not to be an invasive alien yourself. Stay on marked trails and roads, and don't bring in exotic plants or animals; clean your boots thoroughly before and after hikes to keep invasive species from spreading.

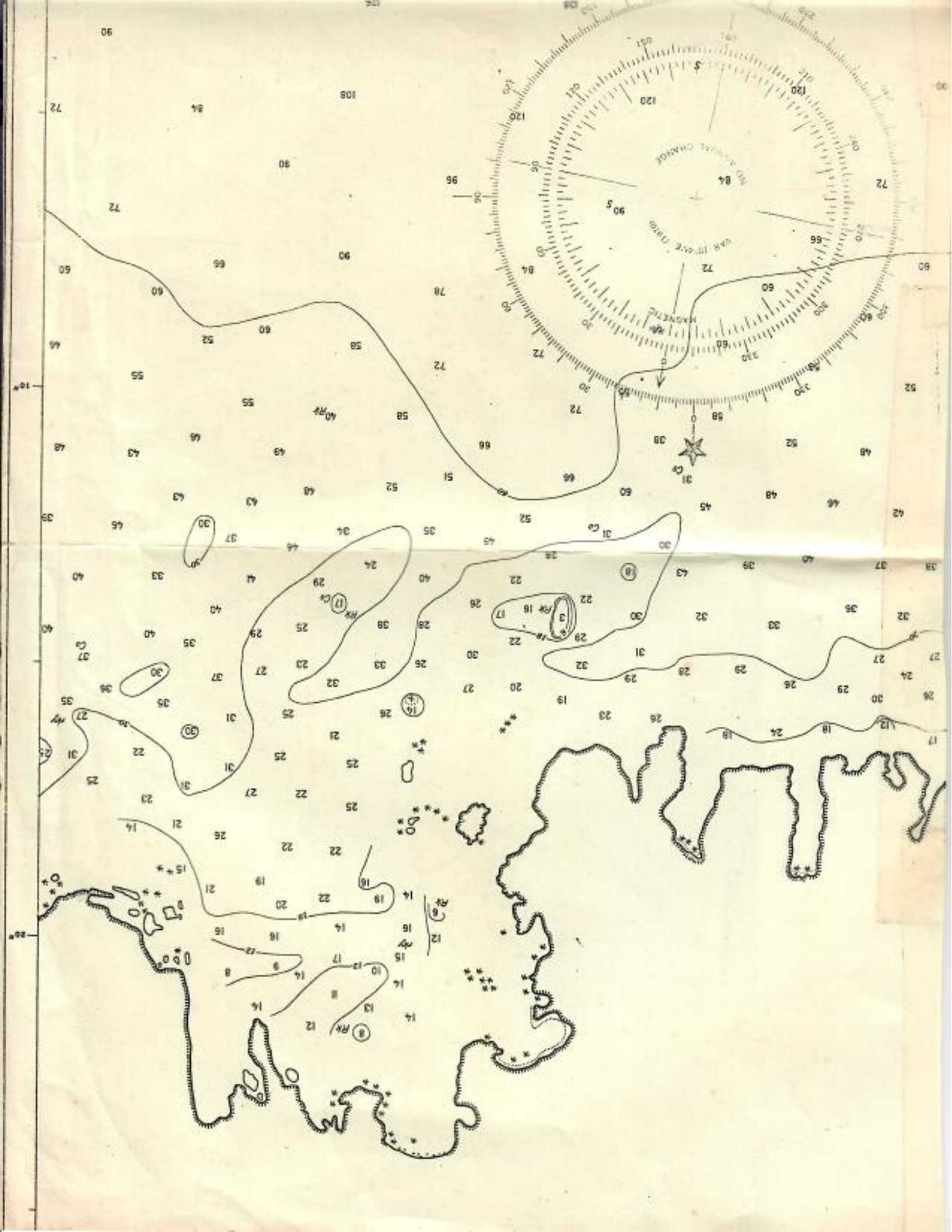
— L. J. F.

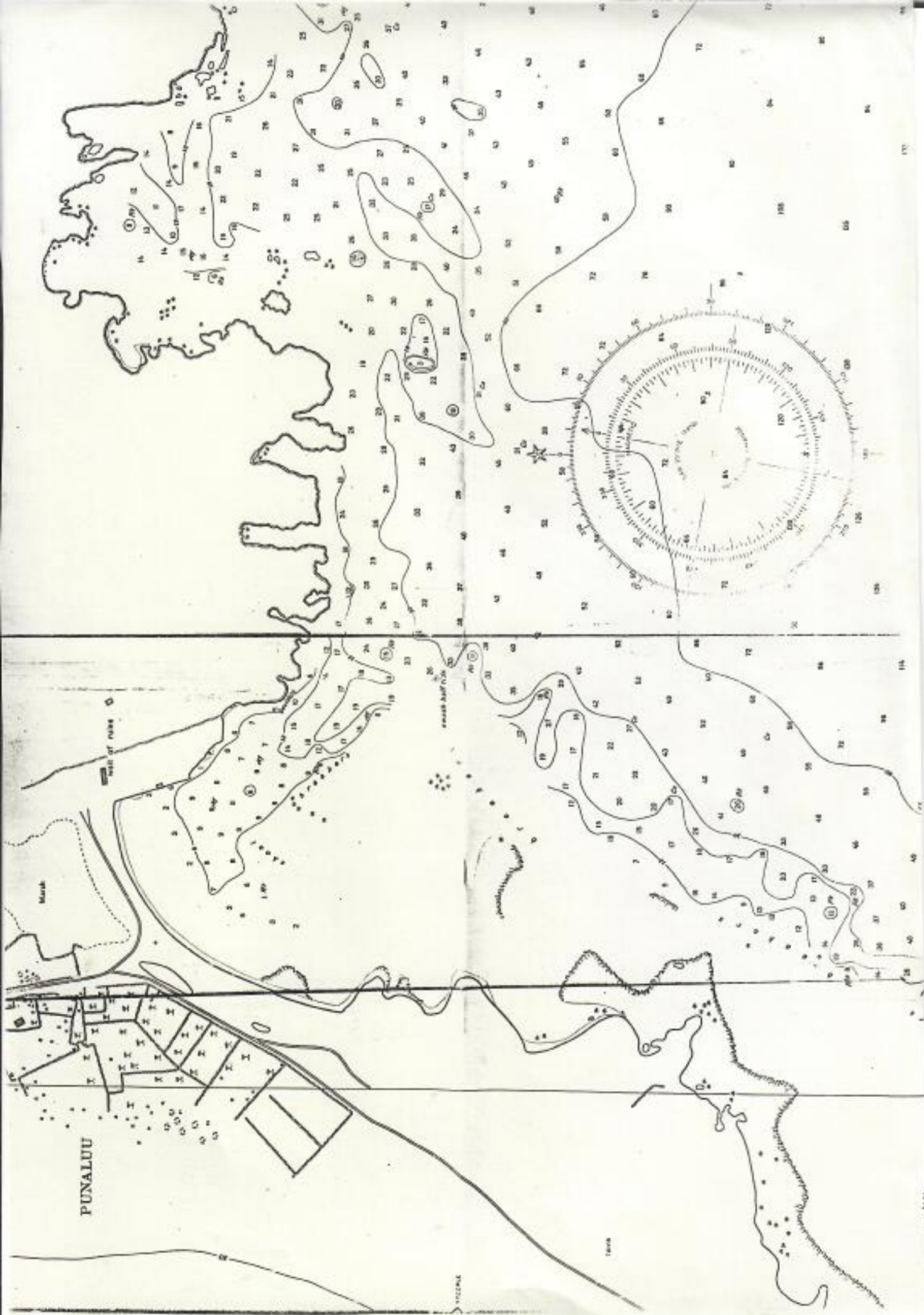


George - For
your pleasure
☺
Kare

PUNALUU







PUNALUU

MARSH

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1:10,000

1:10,000

HERB
KAWAINUI
KANE

PO. BOX 4653
KAILUA-KONA
HAWAII 96745
808/322-3441

7/16/84

Dear George

Mahalo for the material. You are inspiring me
to do more with the imagery of the turtle.

*Also
RAB*

Received 3-7-84

**HERB
KAWAINUI
KANE**

78-6740 Alii Drive
Kailua-Kona, Hawaii 96740
808 322-3441

Dear George,

The life-size sculpture is at my home on Alii Drive
in Kailua-Kona.

The painting is, I believe, still at Punaluu
restaurant, however I have heard that the restaurant
is closed due to lack of group tours coming through.
You might try calling the C. Brewer person in Honolulu
who is in charge of Brewer land development in the Big
Island ; he should be able to tell you where the painting
is or refer you to someone on Hawaii who can.

Mahalo for your interest,



H. Kane
P.O. Box 4653
Kailua-Kona, HI 96745

HERB KAWAINUI KANE

78-6740 Aili Drive
Kailua-Kona, Hawaii 96740
BOX 322-3441

1/31/83

Mr. George Balazs
P.O. Box 3830
Honolulu 96812

Dear Mr. Balazs,

My agent, Greg Bloch, told me of your interest in the painting of the turtle-maiden and the legend behind it.

This is found in pp 608-609, Native Planters in Old Hawaii, Handy & Handy, with Pukui, Bishop Museum Bulletin 233, Bishop Museum Press, 1972.

The name of the fresh-water pond just behind the black sand beach at Punalu'u, Hawaii Island, is Ka-wai-hu-o-Kauila (The gushing waters of Kauila). Kauila was born from an egg laid by a supernatural sea turtle, and was so named because her shell was the color of polished kauila, the wood used for spears. She was a changling who could assume human form and play with the children, then return as a turtle to the bottom of the pond to sleep.

One may assume that she was the mo'o of that pond. These were the guardians of Hawaiian fish ponds, who could change themselves into young women, or lizards, or turtles.

I've also done this imagery as a life-size sculpture in fiberglass of a young woman sitting erect on the back of a large sea turtle. It floats. It is also a fountain, for a small electric pump forces water out of apertures in her sea-weed head lei, which trickles down over her body and the body of the turtle.

I'll be speaking about my work at Kamehameha Schools, 7 - 8:30 PM, at the Koniā Bldg, Rm 108-109 on Thursday Feb. 10. This is part of the K Schools' continuing education program, and is free. For more information their number is 842 8279.

Aloha pumehana,



More Ka'u condos proposed

HILO — A \$8 million, 74-unit resort condominium in the Sea Mountain Resort of Ka'u has been proposed, the Hawaii County Council was informed yesterday.

The project would be the second residential development in the project owned by C. Brewer & Co. A 74-unit condominium known as Colony 1 was finished four years ago.

According to planning director Sidney Fuke, the project would be developed by KLG8 Partners which is seeking a planned development permit from the Hawaii County Planning Commission. A shoreline development permit is also required.

The condominium would be built in 11 separate buildings on a 4.8-acre site near Sea Mountain Golf Course Road above the present condominiums.

Units would be marketed at prices ranging from \$125,000 to \$185,000. There would be 26 one-bedroom units, 39 two-bedroom units and nine with three bedrooms.

The resort presently includes a golf course, restaurant, tennis courts and some homesites near the fairways.

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Here you can relax, go barefoot, put away your ties and suits.
Laugh and talk with your colleagues.
Look through a relaxed prism.
See problems in a new and different light.
The winter shadows of the world's great leaders walk with you.
Their thoughts whirl about the steep-pitched vaulting roofs in
league with the Hawaiian Kahunas and Alakai's.
If you tread softly and listen carefully, you may hear one of the
Kahunas or Alakai's "Seminars" in the very early morning just
before the sun has risen.
What you hear is a gentle intertwining of the past and the future.



DESCRIPTION OF CONFERENCE FACILITIES

The 4,000 s.f. Conference facility, consisting of three building modules connected by a curved lanai, nestles on a majestic lava promontory at one of the most remote and beautiful sites on the Big Island of Hawaii. Looking north from the 120 chair Conference Room A you can see the deep blue sky bending down to touch the high rain forests of 13,680 ft. Mauna Loa. Just below them lie the hillside macadamia nut orchards, sugar cane fields and the unique flat-topped Makaanau Mountain and its sister cinder cone Wailau. From either the southern side of the facility or the 40-chair Conference Room B or 60-chair Conference Room C, you can view the magnificent Pacific Ocean and calm protected coves and lagoons of Ninole Beach. Within walking distance from the Institute across a lovely wooden bridge are excellent accommodations, dining and recreational facilities.



Conference Rooms and Equipment

You can utilize one or all three conference rooms depending on the size of your group. Our Conference Coordinator can arrange for all your equipment needs including xeroxer, electric typewriter, slide projectors and screens, dictation equipment and other items.

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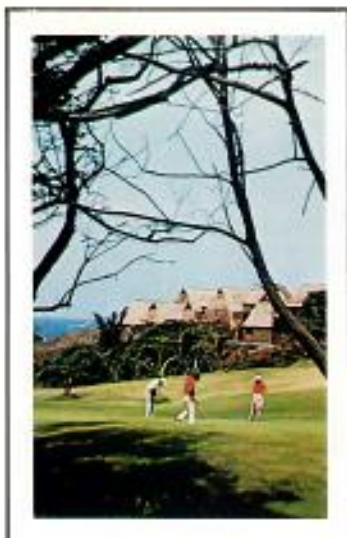


Accommodations

Reside in the luxurious, fully furnished Colony One Condominiums whose Hawaiian designs reflect the Ka'u District's unique culture and natural heritage. Composed of 76 units with Hawaiian motifs and bounded by the 1st and 18th fairways of the Seamountain Golf Course, Colony One is surrounded by a luxuriantly planted layout of palm, plumeria, monkeypod and Wili-Wili trees, sea grapes, Hibiscus and Bougainvillea plants.

There are six floor plans including studio, one and two bedroom units. Featured in different condominiums are high beamed ceilings, Hawaiian paddle fans, sunken baths, all electric kitchens, dining lanais, upstairs bedrooms or living rooms. Almost every condominium has a view of the sea and outside that marvelous feeling of space and room to breathe in every direction from the mountains to the sea.





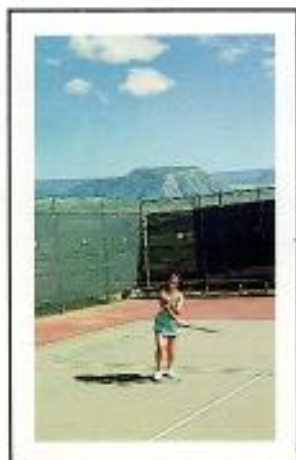
Recreational Facilities

Within walking distance from the condominiums and the conference facility is the delightfully uncrowded 6,106 yard Seamount Golf Course. The 18 hole par 72 course is designed to please and test the mettle of the low handicapper as well as the professional golfer. Challenges are to be found on many of the holes, but especially on the 534 yard sixth which requires strategy

to carryover a lake and a rocky out-cropping in the middle of the fairway shielding an ancient burial ground. The seventeenth calls for a deft shot placement among scattered monkeypod trees and no fewer than four lakes.

The Polynesian-styled clubhouse overlooks Ninole Cove with its idyllic freshwater lagoons. Our Conference Coordinator will arrange tee times, equipment rentals and other activities and there's a driving range and practice green to warm up on. Scenically, all the holes are lovely but the loveliest are the beautiful ocean vista from #5, the farthest south you've ever golfed in the U.S.A. from #9, the great scene of the sugar cane fields from #14, and at the 18th the 360 degree panorama of Punalu'u from rainbows to rain forests, mountains to macadamia and sugar cane to seashore.

For tennis enthusiasts, our newly opened tennis center includes four Laykold courts and a pro shop to meet all your needs. The courts located directly across from



the Colony One Condominiums provide a spectacular view of the majestic Mauna Loa mountain range and the cinder cones of Wailau and the flat-topped Makaanau (or caterpillar mountain as it is known locally). Upon request, the professional tennis services of Peter Burwash Internationale are available for organizing and coordinating that special tennis event for your group.

Food—Coffee Breaks

Our Conference Coordinator will handle all your dining needs including breakfast, lunch and dinner. Meals are served at the beautiful Punalu'u Village Restaurant, which overlooks the famous black sand beach. Cocktail and social hours are held at the restaurant's black sand beach bar. Additionally, luncheon buffets can be arranged at the Conference Facility upon special request. Our Coordinator will also arrange for coffee breaks at the conference site in conjunction with your needs. A specialty with your coffee often includes hot Malasadas (Portuguese doughnuts).


Seeing King Kamehameha's Island

The largest member of the Hawaiian Archipelago, the island of Hawaii, was the birthplace of Kamehameha the Great, first ruler of all the islands. A great variety of scenic and historic tours of the "Big Island" can be specially tailored to your interests and time available. They include Volcanoes National Park, the Hilo Coast, and the Kona Coast.



We would be very happy to analyze the needs of your Conference Group. Call (808) 928-8301 collect, or write our Aspen Conference Coordinator at P.O. Box 85, Pahala, Hawaii 96777 for a Needs Analysis & Information Sheet.

COLONY I CONDOMINIUMS

SeaMountain at
Punalu'u 

ON THE BIG ISLAND OF HAWAII

Punalu'u Rental Management Co., Ltd.
P.O. Box 70 • Pahala, Hawaii 96777
Telephone (808) 928-8301

Beautiful, secluded resort at Black Sand Beach Punalu'u. Luxurious cottage apartments amidst palm-fringed gardens. Superb golf and tennis. Swimming, hiking, dining. A special Pacific holiday for getting away from it all to "old" Hawaii.

TWO-NIGHT MINIMUM	NO. OF PERSONS	5/1/84	12/16/84
		THRU 12/14/84	THRU 4/30/85
STUDIO	1-2	\$49-\$57	\$58-\$66
1-BEDROOM	1-2	\$63-\$71	\$75-\$83
2-BEDROOM	2-4	\$79-\$89	\$95-\$105

**OVERNIGHT
RATES**

STUDIO	1-2	\$59-\$67	\$68-\$76
1-BEDROOM	1-2	\$78-\$86	\$90-\$98
2-BEDROOM	2-4	\$99-\$109	\$118-\$128

Additional persons \$8.00 each.

Rates subject to 4% State Tax.

Discount rates for groups and long-term stays.

*20% deposit required within 10 days.
Balance due 30 days prior to arrival. Cancellations must be received 30 days prior to arrival to insure full refund.*

Typical spacious floor plans.

UNIT TYPE B TWO BEDROOM



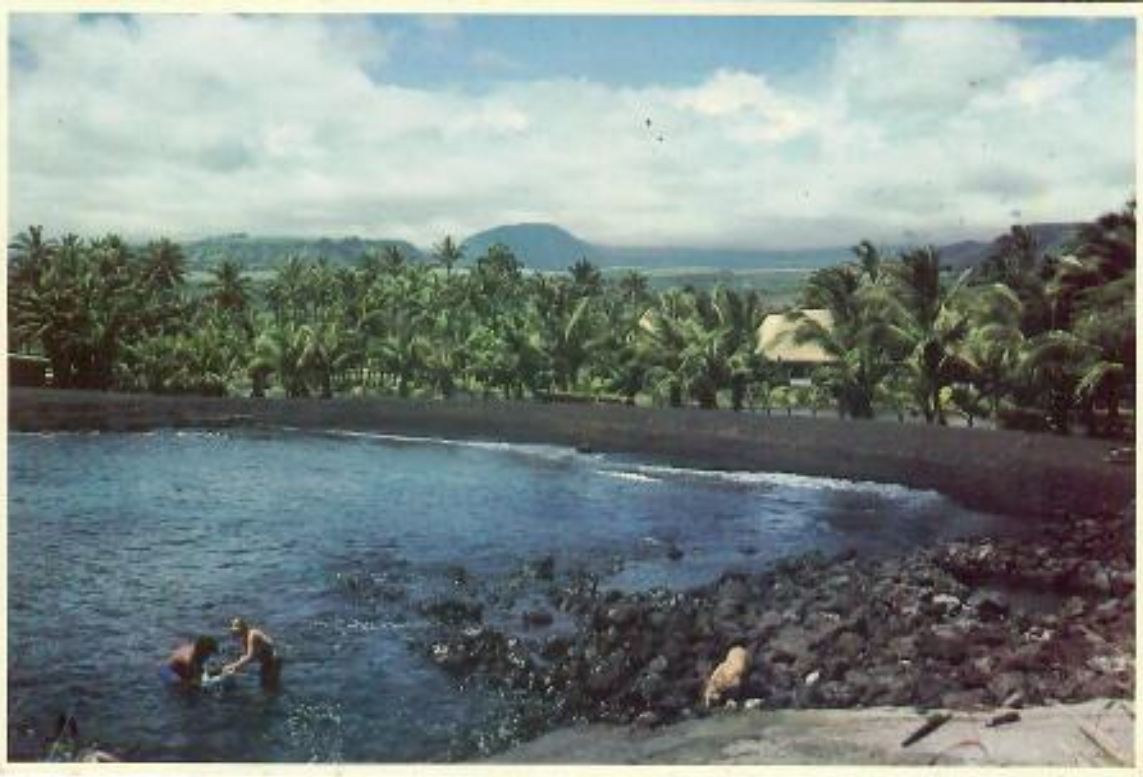
UNIT TYPE A ONE BEDROOM



UNIT TYPE C ONE BEDROOM



UNIT TYPE E STUDIO



ROYAL
Mini Print

PUNALUU Black Sands Beach
B9746



Distributed by Maui Sales, Kahului, Maui, Hawaii

10 February 1980

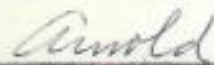
Mr. Balaza,

Received your welcome note and inclosure. Thanks.
In early December 1979, I seen a nesting at Kamehame.
The eggs either should be hatching by now or have
already hatched. None so far in Punalu'u since the
last incident with the two boys.

As for sending you Jee's last name and address, I will
not. Furthermore, I haven't seen him catching turtles
in a long while, but others have. Also, I would not
think anyone will send you tags, do to the fact turtle
catching is against the law.

A suggestion that might help is to write an article
and have it publicized in our local Ka'u Report and the
Tribune Herald about what you've done and how important
it is to have these tags if found and anyone finding one
to just enclose it into an envelope and mail it to you
with no questions asked. Do this publication two or
three times a year, you might get some results.

Sincerely,


Arnold Howard

ARNOLD L. HOWARD
P O BOX 4
PAHALA, HI.
96777

C. Brewer Drops Plan for Beach

PAHALA, Hawaii—C. Brewer & Co. officials last night announced the withdrawal of their application to create a white sand beach at Ninole Cove. The proposal had met with overwhelming public opposition.

Brewer announced its decision to drop the beach project at a hearing held by the U.S. Army Corps of Engineers at Pahala High School. The site is adjacent to Brewer's Seamountain resort development at Punaluu.

A Brewer subsidiary, Hawaiiiana Investment, had applied to the engineers for a permit to dredge the brackish water cove, fed by fresh water springs, and import 600 tons of white sand to create a beach.

But the engineers received a petition signed by about a thousand island residents opposed to the place-

ment of the sand.

Seventeen persons spoke in opposition to the beach proposal and only one man spoke in favor of it. Opposition was based on historical, cultural, and environmental concerns.

One man, Randy Kalahiki, stressed that Ninole Cove is part of a complex of native Hawaiian sites in the area and the sites are expected to be placed on the National Register of Historic Places.

Now let your
mind's eye
drift toward
Hawaii Island
and your own
vacation
home at
Colony One.

COLONY I CONDOMINIUMS
P. O. BOX 85
PAHALA, HAWAII 96777
PHONE: (808) 928-8301

Colony One, a fee simple condominium,
is a project of

Hawaiiana Investment Co., Inc.

a C. BREWER company

P. O. Box D, Naalehu, Hawaii 96772

Ph.: 928-8347 • 928-8348



The sun glints
on vaulting roofs,
taking their
steep-pitched cue
from cool,
Hawaiian lodges
that stood here
yesteryear.



Kamehameha, king of all Hawaii,
Grew to manhood here
Two centuries ago.
Drawing his majesty
From domed mountains
And the sea's white gnashing
At black lava headlands.
Chanting up his red gods
At those stone temples
On the Point.
It's another tradewind day.
The gardener squints aloft
For his fickle ally, rain,
Then turns his sprinklers on
Hibiscus and seagrape.
From the eighteenth green comes
A williwaw of words.
Equal parts of mirth and outrage
As someone duffs an easy putt.



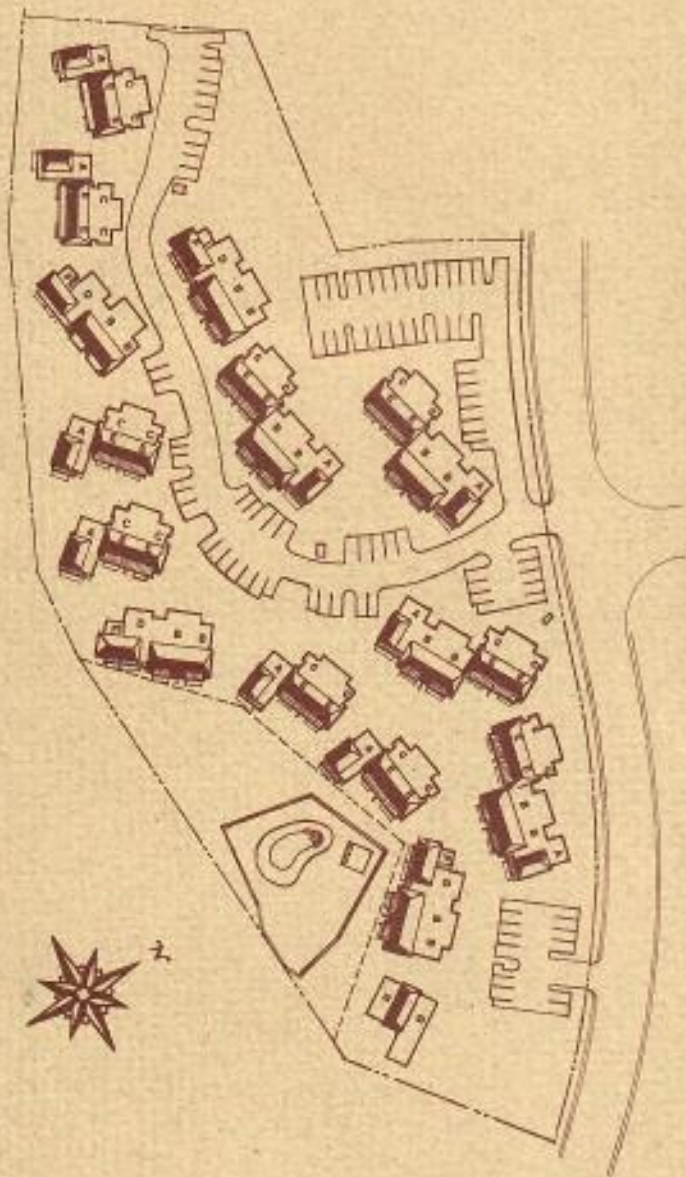




At the pool kids splash and shriek
In endless replays
Of the waterslide adventure.
A twosome, togged for tennis
Jogs by, courtward bound.
A doctoral group
Makes way for them,
Regroups, heads for
Aspen Institute.
You tune in on their talk.
Communications and Society?
Mind and Man?
Baseball and batting averages.
Suddenly you get
The oneness of it all.
Yesterday and today.
Sea and Serenity.
Mountains and men.
The wonder of a newness
As old as time itself.
All waiting for you now
At Colony One.



Six floorplans, including studios, one and two bedrooms. Featured in different residences are high beamed ceilings, Hawaiian paddle fans, sunken baths, all-electric kitchens, dining lanais, upstairs bedrooms or living rooms. Almost every residence has a view of the sea. Generous outdoor living space, with 76 units situated over 5 1/4 acres. Personal gardens with many homes. Across the golf course from Aspen Institute-Hawaii, site of humanistic and cultural seminars.



Island of Hawaii



This is off-the-road country. But nearby Highway 11 can put you in quick touch with all the fun of the Big Island. Visit Volcano House, whose next door neighbor is Madame Pele. Waiakea Resort Village, for fine dining, exotic shopping and South Seas entertainment. See a tough nut named macadamia become a tasty delicacy at Brewer Orchards, the world's largest macadamia nut processor. Or island-hop to Oahu and all the Neighbor Islands — a short journey from Hilo or Kona.

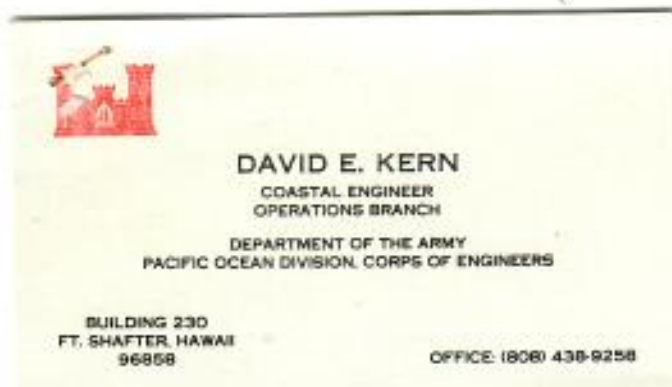
ROUTING AND TRANSMITTAL SLIP		ACTION
1 TO Mr. Balazs	INITIALS	CIRCULATE
	DATE	COORDINATION
2	INITIALS	FILE
	DATE	INFORMATION
3	INITIALS	NOTE AND RETURN
	DATE	PER CONVERSATION
4	INITIALS	SEE ME
	DATE	SIGNATURE
REMARKS		
<p style="text-align: center;">DEPARTMENT OF THE ARMY</p> <p style="text-align: center;">U.S. ARMY ENGINEER DISTRICT, HONOLULU BUILDING 230 FORT SHAFTER, HAWAII 96858</p> <p>SUBJECT: Proposed Construction of Public Beach Park at Ninole Cove, Ka'u District, Hawaii, File No. PODCO-O 1457-D</p> <p>Per your request of 27 Dec 78, attached are copies of Notice of Public Hearing and a Preliminary Environmental Assessment for subject project.</p> <p>2 Incl As stated</p> <p><i>If you have any questions, give me a call. Nice pic in '79 DLCO calendar!</i></p> <p>Do NOT use this form as a RECORD of approvals, concurrences, disapprovals, clearances, and similar actions.</p>		
FROM <i>David Kern</i> DAVID E. KERN, Operations Branch US Army Corps of Engineers		DATE 15 Jan 79 PHONE 438-9258

OPTIONAL FORM 41

AUGUST 1967
GSA FPMR (41CFR) 100-11.205

5041-101-01

A GPO : 1973 OF-489-218



DEPARTMENT OF THE ARMY
Honolulu District, Corps of Engineers
Building 230, Fort Shafter
Hawaii 96858

PODCO-0

18 December 1978

NOTICE OF PUBLIC HEARING
ON DEPARTMENT OF THE ARMY PERMIT APPLICATION
NO. PODCO-0 1457-D FOR THE CONSTRUCTION OF A PUBLIC BEACH
PARK AT NINOLE COVE, KA'U DISTRICT, HAWAII

TO WHOM IT MAY CONCERN:

1. Hawaiiana Investment Company, Inc., P. O. Box D, Naalehu, Hawaii 96772, has applied to the Department of the Army for a permit to construct a public beach park at Ninole Cove, Ka'u District, Hawaii. This application is being evaluated under Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403) and Section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344).
2. The permit application was announced by our Public Notice No. PODCO-0 1457-D, dated (16 October 1978) (copy attached), which describes the proposed project.
3. A public hearing will be held to acquire information or evidence which will be considered in evaluating the proposed permit action and assist the District Engineer in (making a decision) on the permit application. The public hearing will be held at:

PLACE: Ka'u High School Cafetorium
Pahala, Hawaii

DATE: 25 January 1979

TIME: 7:00 p.m.
4. During the hearing, the applicant will discuss the features of the project and its environmental impacts. The public will have the opportunity to present their views, opinions, and information on the permit application.

Incl 1

18 Dec 78

5. This notice of public hearing is being sent to various agencies of the Federal, State, and County governments. It is also being sent to various organizations and citizens' groups that have expressed an interest in the permit action and to the parties requesting a hearing. However, all citizens, whether or not they have received the notice are invited to be present or represented at the hearing. Everyone will be given full opportunity to present his views on the permit application. Oral statements will be heard, but for the accuracy of the record, all important facts should be submitted in writing. Written statements may be submitted at the hearing or mailed to the District Engineer, at the address given on the letterhead, before the hearing.

6. A Preliminary Environmental Assessment for the proposed project has been prepared by the Corps of Engineers and is available at the Operations Branch, Honolulu Engineer District, Room 204, Building 230, Fort Shafter, telephone 438-9258. Please bring this notice of public hearing to the attention of persons interested in the proposed project.

1 Incl
Public Notice No. PODCO-O
1457-D, 16 Oct 78



PETER D. STEARNS
Colonel, Corps of Engineers
District Engineer

DEPARTMENT OF THE ARMY
Honolulu District, Corps of Engineers
Building 230
Fort Shafter, Hawaii 96858

PODCO-0

16 October 1978

PUBLIC NOTICE NO. PODCO-0 1457-D

TO WHOM IT MAY CONCERN:

1. Notice is hereby given that the Hawaiiana Investment Company, Inc., (a C. Brewer Company), P. O. Box D, Naalehu, Hawaii 96772, has applied to the Department of the Army for a permit to perform work in the navigable waters of the United States, island of Hawaii, State of Hawaii, and to (discharge fill material) into waters of the United States. This application will be evaluated under Section 10 of the River and Harbor Act, approved 3 March 1899 (33 U.S.C. 403); and Section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1433).
2. The applicant proposes to (construct a public beach park at Ninole Cove) Ka'u District, by excavating debris and rubble deposited by the November 1975 tsunami, removing existing muck, dirt and grass from the shore area and replace it with 600 tons of imported white sand. Spoil will be disposed of on land owned by the applicant a half mile from the project site. The proposed beach park is expected to complement and supplement the applicant's existing 18 hole golf course and tennis center in providing an additional variety of recreational activities for both resort complex users and the general public. All work will conform to the attached drawings (5 sheets) entitled "Ninole Cove Beach Park, Ka'u District, Hawaii County, Hawaii, C. Brewer and Company," dated April 1978.
3. The latest published version of the National Register of Historic Places has been consulted and there are no registered properties or properties eligible for inclusion therein involved in the proposed project. This consultation of the National Register constitutes the extent of cultural resource investigations by the Corps of Engineers. We are otherwise unaware of the presence of such cultural resources.
4. Based on the initial assessment of the environmental impact of the proposed activity, a preliminary determination has been made that a Federal Environmental Impact Statement for the proposed activity is not required under the provisions of the National Environmental Policy Act of 1969. This determination will be reviewed as additional information is developed and in light of responses to this notice. NEPA
5. A permit issued by the Department of the Army does not give any property rights, either in real estate or materials, or any exclusive privileges, and does not authorize injury to private property or invasion of private rights, or infringements of Federal, State or local laws or

16 Oct 78

regulations. Further information may be obtained from the Operations Branch, Honolulu District, Room 204, Building 230, Fort Shafter, telephone 438-9258. Written inquiries and comments should be mailed to this District at the address indicated in the letterhead and should make reference to this public notice number.

6. The applicant has requested the following Government authorizations for the proposed work:

- a. Conservation District Use Application approval from State of Hawaii Department of Land and Natural Resources.
- b. Special Management Area Permit from the County of Hawaii Planning Department.
- c. Grading Permit from the County of Hawaii Department of Public Works.

The applicant has been advised that all required State and local authorizations, certificates, and variances must be obtained before the Department of the Army permit application will be processed to a conclusion.

7. The responsibility of the Corps of Engineers is the protection of the public's interest in the navigable waters of the United States. The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which are relevant to the proposal will be considered; among these are conservation, economics, aesthetics, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use, navigation, recreation, water supply, water quality, energy needs, safety, food production, and, in general, the needs and welfare of the people.

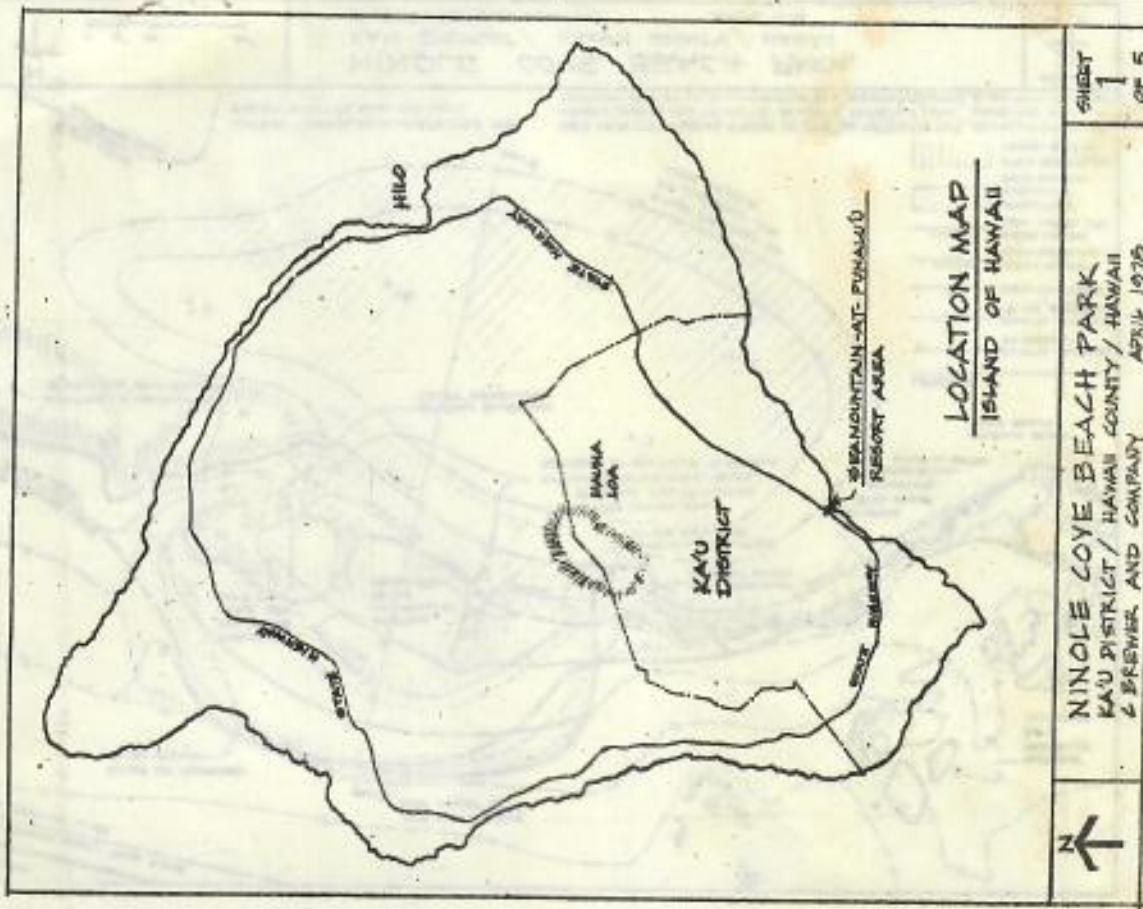
8. Interested parties may submit in writing any comments that they may have on the proposed work. Comments should be forwarded so as to reach this District no later than thirty (30) days from the date of this notice.

9. Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

1 Incl
Drawings (5 sheets)



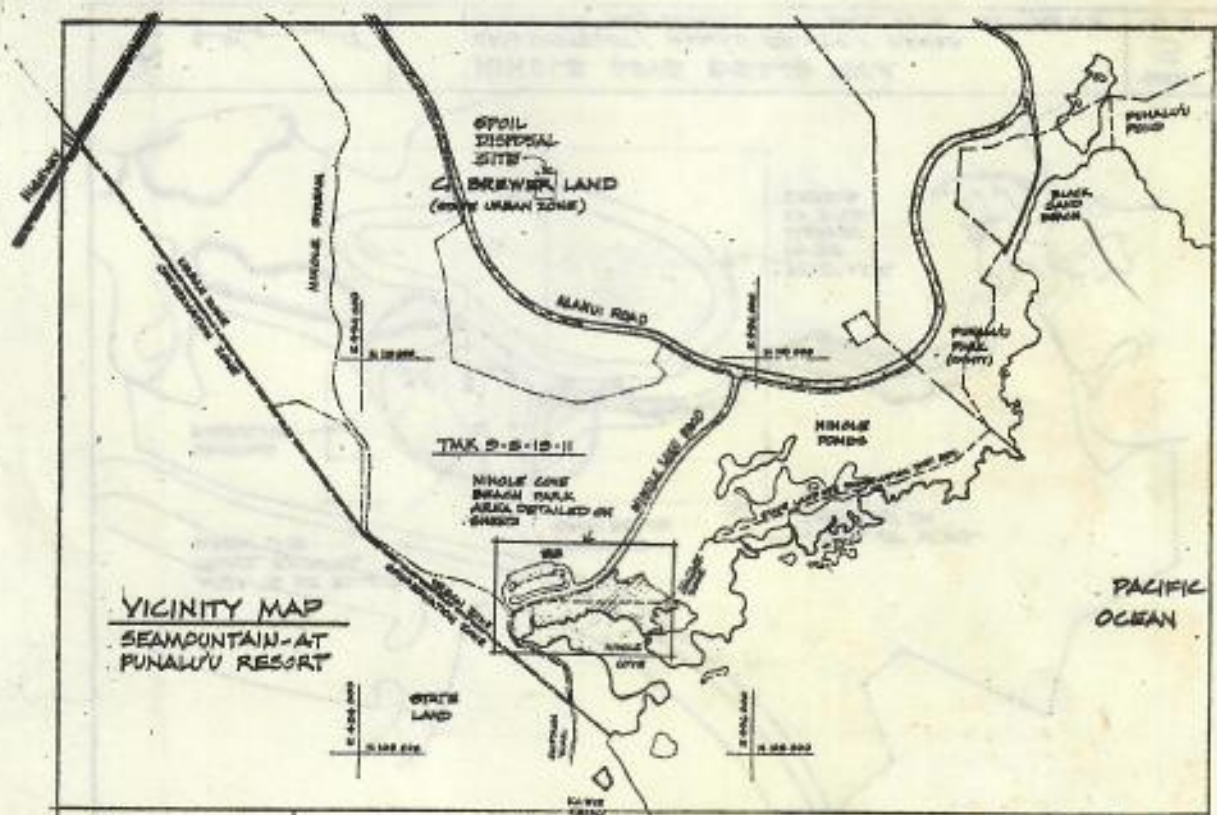
PETER D. STEARNS
Colonel, Corps of Engineers
District Engineer



SHEET
1
OF 5

LOCATION MAP
ISLAND OF HAWAII

NINOLE COVE BEACH PARK
KA'U DISTRICT / HAWAII COUNTY / HAWAII
© BREWER AND COMPANY APRIL 1975



VICINITY MAP
SEAMOUNTAIN-AT-PUNALU'U RESORT

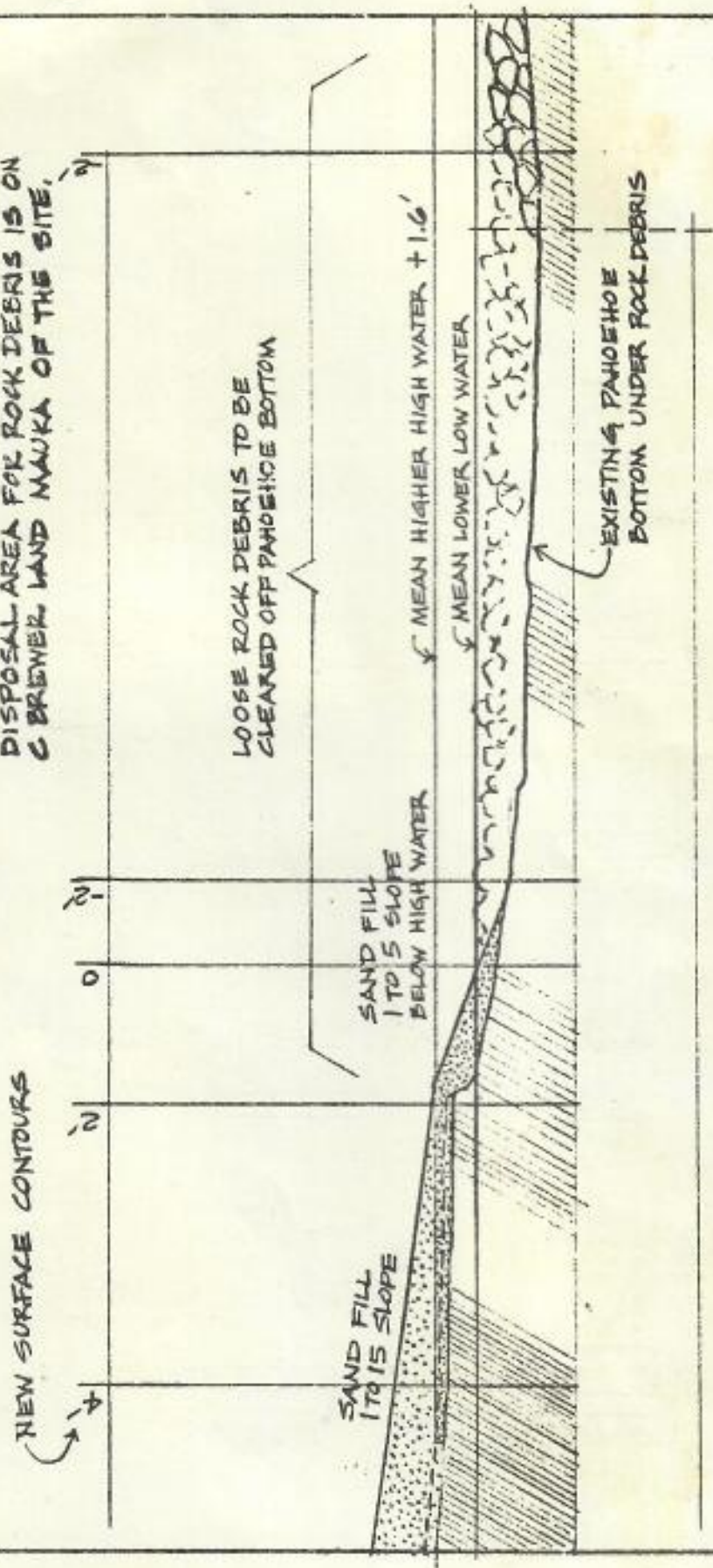


NINOLE COVE BEACH PARK
KA'U DISTRICT / HAWAII COUNTY / HAWAII
© BREWER AND COMPANY APRIL 1975

REV JUNE 1975

SHEET
2
OF 5

ROCK DEBRIS TO BE REMOVED = APPROX. 1100 CYD,
 SAND TO BE PLACED IN AREA
 UNDER MEAN HIGHER HIGH WATER = APPROX. 200 CYD,
 ROCK FILL (AT ENDS OF BEACH) = APPROX. 40 CYD,
 DISPOSAL AREA FOR ROCK DEBRIS IS ON
 C BREWER LAND MAUKA OF THE SITE.



EXISTING CONTOURS
 TO BE CHANGED

SECTION X-X
 SEE SHEETS 3 & 4 FOR PLAN LOCATION

SCALE:
 VERT. 1" = 10'
 HORIZ. 1" = 20'

NINOLE COVE BEACH PARK
 KAU DISTRICT / HAWAII COUNTY / HAWAII
 C BREWER AND COMPANY APRIL 1978

PRELIMINARY
ENVIRONMENTAL ASSESSMENT

DEPARTMENT OF THE ARMY PERMIT APPLICATION FOR THE CONSTRUCTION OF A BEACH
PARK AT NINOLE COVE, ISLAND OF HAWAII, STATE OF HAWAII, FILE NO. PODCO-O
1457-D

1. PROJECT DESCRIPTION

1.1 Location. Ninole Cove is located in the Ka'u District, on the island of Hawaii, State of Hawaii, as shown on Sheet 1.

1.2 Work to be Authorized. The (Hawaiiana Investment Company, Incorporated, proposes to excavate debris and rubble from Ninole Cove, to remove mud, dirt, and grass from the shoreline and to place 600 tons of white sand along the shoreline, in order to construct a public beach park at Ninole Cove. All work will conform to the attached drawings (Sheets 2-5). The excavated material will be disposed of on land owned by Hawaiiana Investment Co., Inc., outside of the wetland.

1.3 Purpose of Work. The proposed beach park will complement and supplement the Hawaiiana Investment Co., Inc.'s 18-hole golf course and tennis center providing additional recreational activities at the Seamountain-at-Punaluu resort complex. The general public will also have the opportunity to utilize the proposed beach park.

2. ENVIRONMENTAL SETTING WITHOUT THE PROJECT

2.1 Ninole Cove was identified as a tidal wetland by the US Army Corps of Engineers. The bulrush (Scirpus validus), honohono grass (Commelina diffusa), the umbrella sedge (Cyperus laevigatus), the seashore paspalum (Paspalum vaginatum) the yellow dock (Rumex crispus) are among the variety of plants found there. The vegetation is frequently inundated during high tide and high surf conditions. The underlying soil is dark muck mixed with beach sand.

2.2 The shoreline consists principally of volcanic basalt and alluvium washed down from the upland areas. A stream, Ninole Stream, empties into the cove. The applicant indicates that a white sand beach was located in the cove in 1954, but that a 1975 tsunami destroyed the beach and dumped debris and rubble into the cove. The maximum tsunami wave heights measured for Punaluu to the northeast and Honuapo to the southwest were 18 feet and 22 feet, respectively. The project area is also subject to subsidence due to earthquakes.

2.3 No human residents exist along the shoreline of the cove. The resort complex, golf course and tennis center are located inland from the cove. A paved road to the golf course provides access to the project site.

Incl 2

2.4 The waters in Ninole Cove are classified as "Class A" waters by State Water Quality Standards. Based on studies in ponds to the north-east of the cove, the waters may not meet the Class A standards because of the nutrient concentration in the groundwater entering the cove. The applicant indicates that the waters in the cove become muddy brown during periods of high rainfall because of discharge from Ninole Stream and that rock and debris are carried into the cove and offshore during periods of heavy stream flow. The waters in the cove are normally clear suggesting a low phytoplankton concentration and low water residence time. Water salinity is variable due to the numerous springs that discharge into the pond. These springs have a discharge volume of 25-30 million gallons per day and a chloride content of 300-400 mg/liter.

2.5 Based upon biological studies of two ponds located approximately 400 feet northeast of the cove, green algae (Pithopora sp.) may be the most abundant algae in the cove. The snail, Melania sp., grazes on the algae. A goby (Eleotris sandwicensis) and a holehole (Kuhlia sandwicensis) may also be common in the cove. The applicant indicates that mo'i and mullet are normally caught in the ocean on the seaward edge of the cove.

2.6 Ninole Cove is not a marine sanctuary or wildlife refuge. No endangered or threatened waterbirds have been reported at the Ninole Cove ponds. Migratory waterfowl and shorebirds, and the indigenous black-crowned night heron have been reported in ponds at Punaluu to the northeast of the cove area and at Ninole Cove.

2.7 The project site is not a flood plain, a productive shellfish area, a Natural Area Reserve, or Marine Life Conservation District. The wetland is not a prime or unique agricultural area, prime groundwater recharge area, or municipal water supply area.

2.8 No sites listed on the National Register of Historic Places are located at the project site. No sites listed in the Federal Register as eligible for inclusion to the National Register of Historic Places are found at the project site. Various reports suggest that archaeological remains are located mauka of the proposed beach and to the west of Ninole Cove. The National Park Service has indicated that Ninole Fishpond and the nameless fishpond connected to it may be eligible for inclusion in the National Register of Historic Places. Appropriate sources are being consulted to determine if any other historic or archaeological sites are located in the project area.

2.9 The cove is used by recreational fishermen, surfers, and bathers, but also provides a general recreational diversion and a quiet, aesthetic area.

3. RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS

3.1 The project site is designated for open space in the County of Hawaii General Plan. The proposed action does not conflict with the land use plan.

4. PROBABLE EFFECT OF THE PROPOSED ACTION ON THE ENVIRONMENT

4.1 Excavation will modify approximately 0.6 acres of cove bottom destroying individual algal mats and snails in the pond. Approximately 0.3 acres of wetland vegetation will be cleared from along the shoreline. White sand will be placed along the shoreline replacing the alluvial material. The basalt nearshore area will be modified in appearance as the sand is not similar to the basalt material. The white sand will increase the complexity of soils in the pond area.

4.2 Water turbidity will temporarily increase during excavation, reducing light-water penetration, and reducing photosynthesis in the algal mats on the cove bottom. No alteration of salinity gradients or distribution is anticipated as the project does not alter the flow of groundwater into the cove. The french drains will permit two covered springs to continue to flow into the pond. Similarly, the project will not alter flushing or circulation characteristics in the pond because the project will not obstruct tidal connection with the ocean or groundwater influx into the pond. Groundwater recharge areas upland of the project site are unaffected.

4.3 The increase in water turbidity will be aesthetically displeasing. The placement of sand on the shoreline is not expected to introduce any pathogens, oil, or grease, into the water and is not expected to have a long-term effect on the color, taste, or odor of the water. The project is not expected to increase water eutrophication because it does not affect flushing characteristics in the cove.

4.4 The sand material is not expected to contain any toxic chemicals or contaminants; thus, it will have no direct destructive effects on nektonic and planktonic populations in the cove. The project may alter existing patterns of animal and plant species diversity found in the area. The project does not obstruct the free movement of fish into and out of the cove. Recreational fishing in the cove will be unobstructed by the project. Access to surfing sites will also be unobstructed.

4.5 The State Historic Preservation Office has indicated that the ponds situated at Ninole Cove appear to be eligible for inclusion in the National Register of Historic Places. Eligibility will be determined conclusively as more information is collected during permit processing.

4.6 The project does not affect any municipal water supply intakes, productive and harvestable shellfish beds, or threatened or endangered species.

5. PROBABLE ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

5.1 The white sand beach will be a new visual element at Ninole Cove. The temporary increase in water turbidity is unavoidable along with the loss of individual plants, algae, and snails.

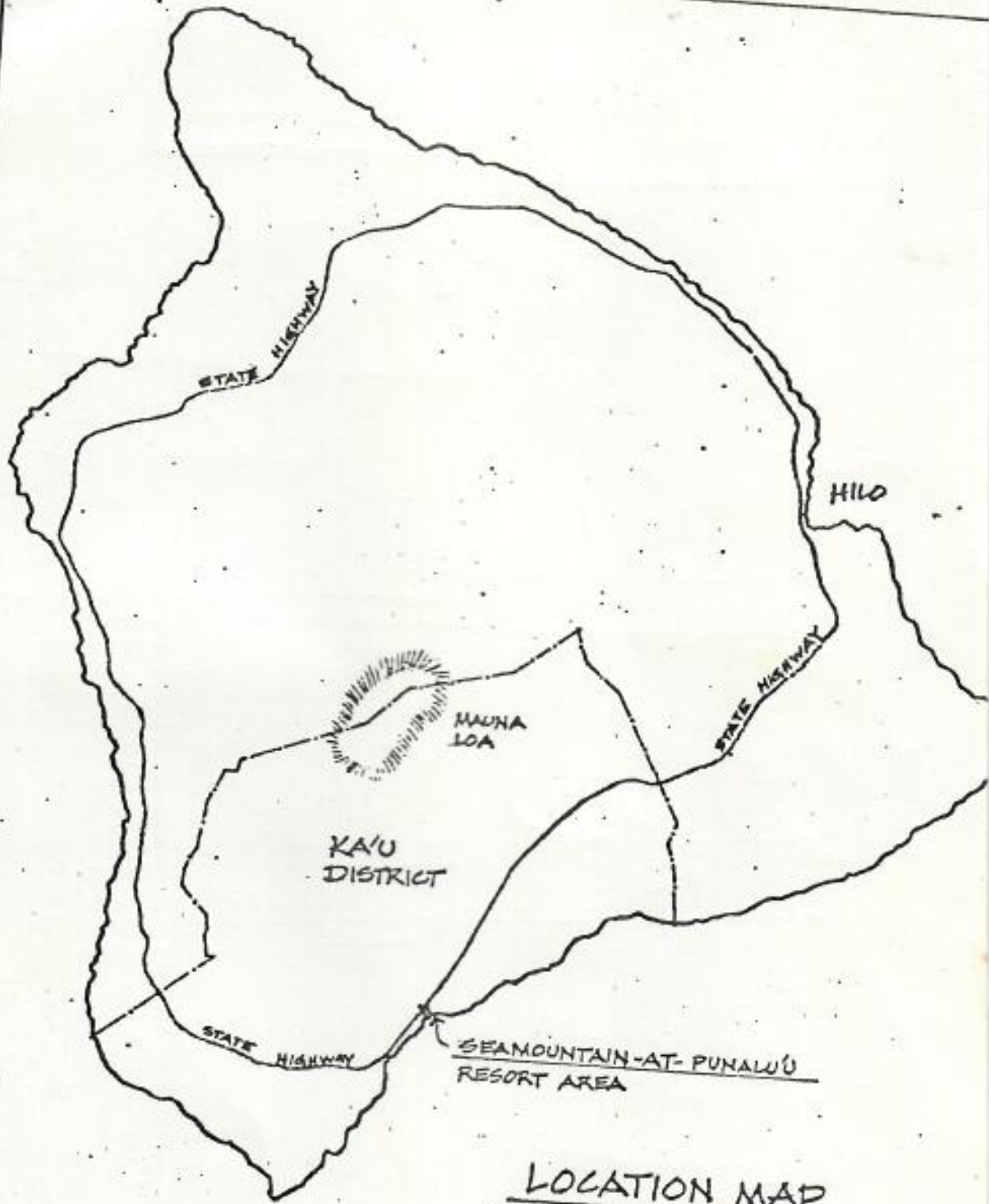
6. ALTERNATIVES CONSIDERED BY THE APPLICANT

6.1 Hawaiiana Investment Company, Inc., has considered constructing a beach park at other locations (Sheet 6) in Ninole Cove, and at Ninole Ponds. The locations were not selected because of too much benthic algae, limited water area, and exposure to heavy surf and wind. The selected site was chosen because of the reasonably large expanse of shallow water, shelter from the prevailing wind, protection from heavy wave, gradual sloping topography, property ownership by the Hawaiiana Investment Co., Inc., lack of significant social use, and lack of the presence of historic or prehistoric resources.

6.2 The no-action alternative would maintain the status-quo.

7. RELATIONSHIP BETWEEN THE SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

7.1 The project benefits principally resort visitors and owners and the general public who will use the beach. Man's continued presence and use of the water area within or without the project area will continue to make the area unattractive to waterfowl and will continue to be a consumptive use of natural resources. The alterations will not prevent the continued use of the cove by fishery, aquatic, or marine resources. Placement of calcareous, white beach sand in an area of radically different geological structure (i.e., barren basalt) will represent a visual intrusion which is out of character with the existing shoreline. The sand will increase the geologic complexity of the substrate and increase habitat diversity at the cove.

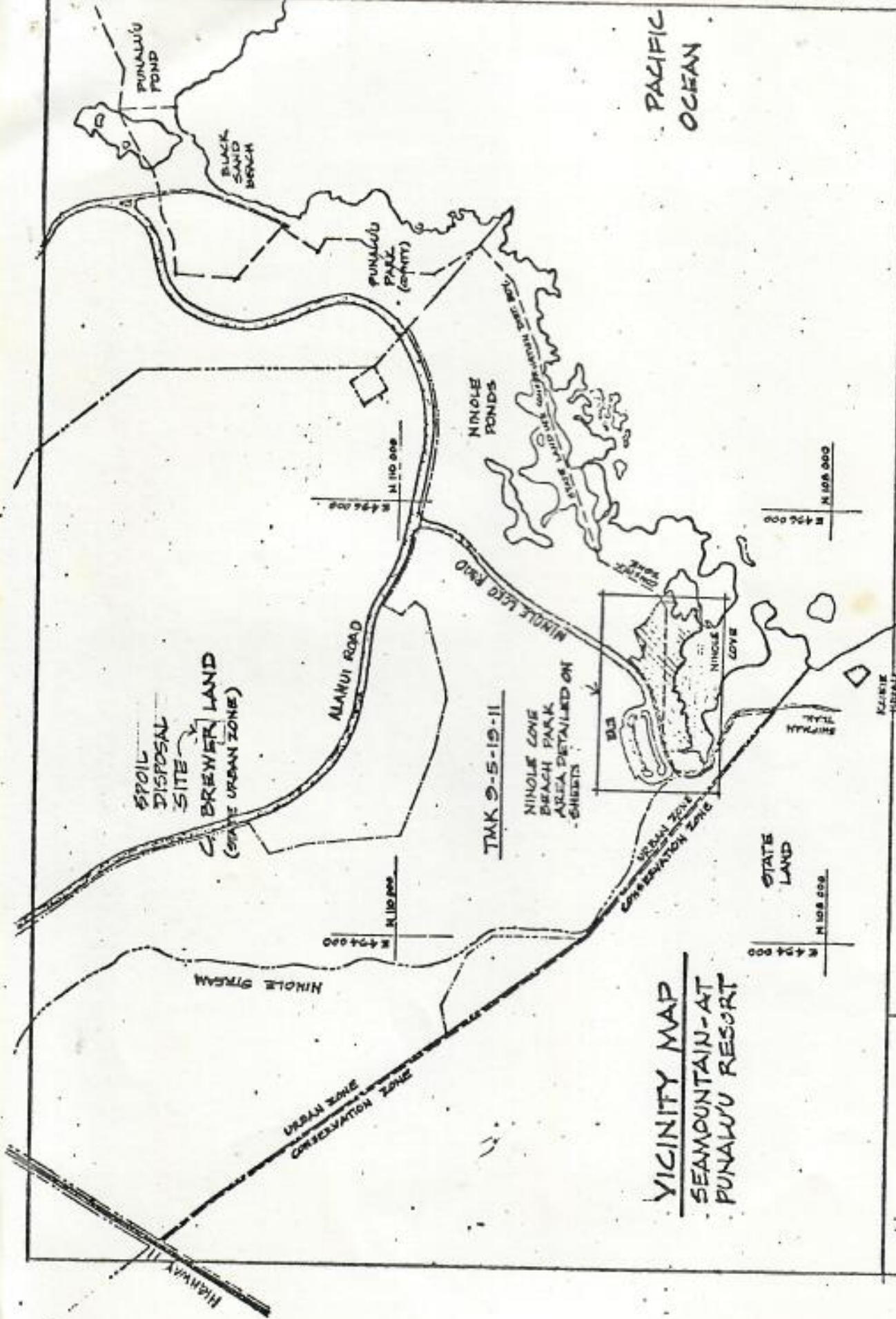


LOCATION MAP
ISLAND OF HAWAII



NINOLE COYE BEACH PARK
KA'U DISTRICT / HAWAII COUNTY / HAWAII
C BREWER AND COMPANY APRIL 1978

SHEET
1
OF 5

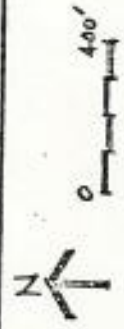


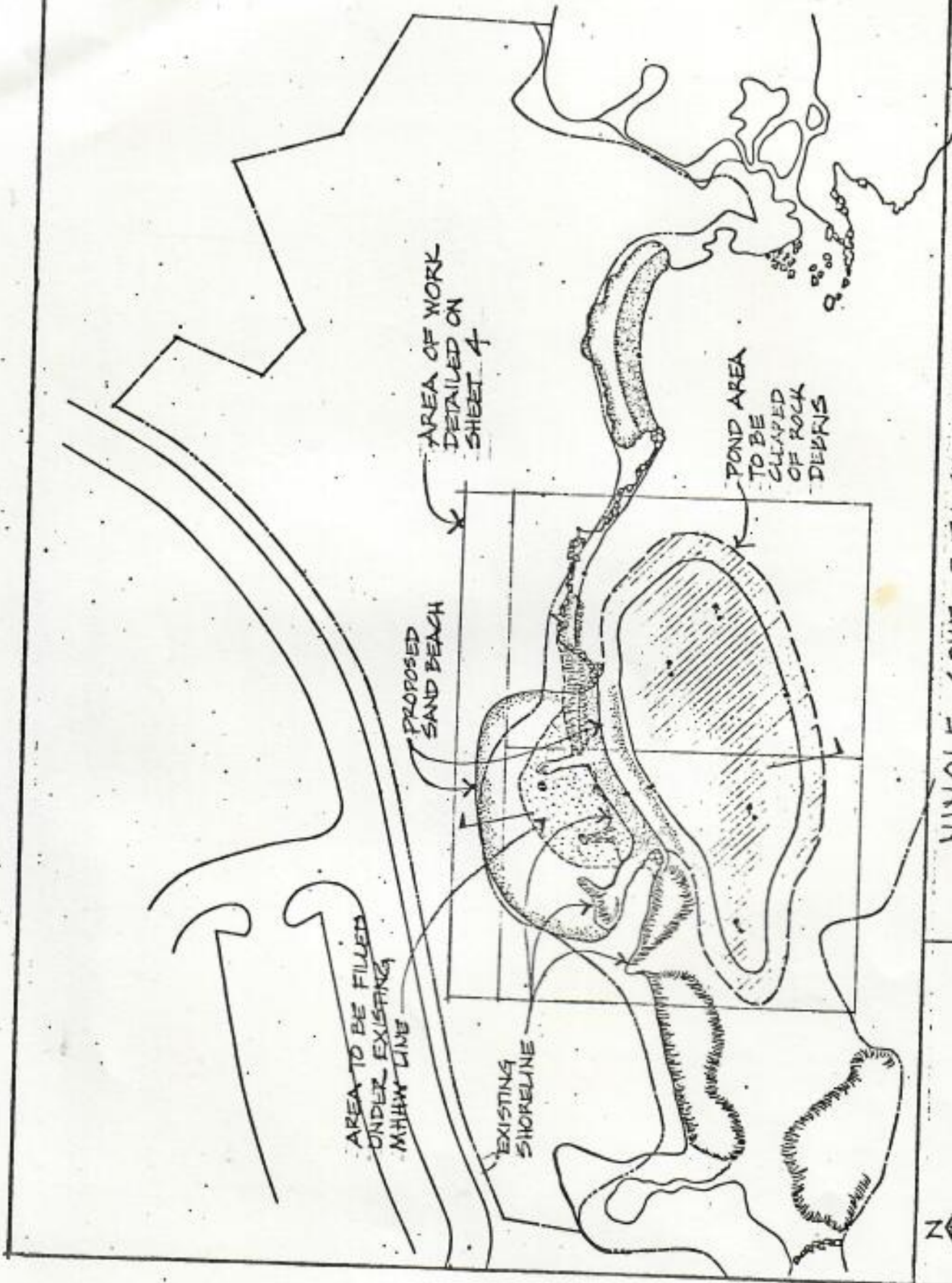
VICINITY MAP
SEAMOUNTAIN-AT
PUNALU'U RESORT

TAK 9-5-19-11
NINOLE COVE
BEACH PARK
AREA DETAILED ON
SHEETS

NINOLE COVE BEACH PARK
KA'U DISTRICT / HAWAII COUNTY / HAWAII
C BREWER AND COMPANY
APRIL 1978
REV JUNE 1978

SHEET
2
OF 5



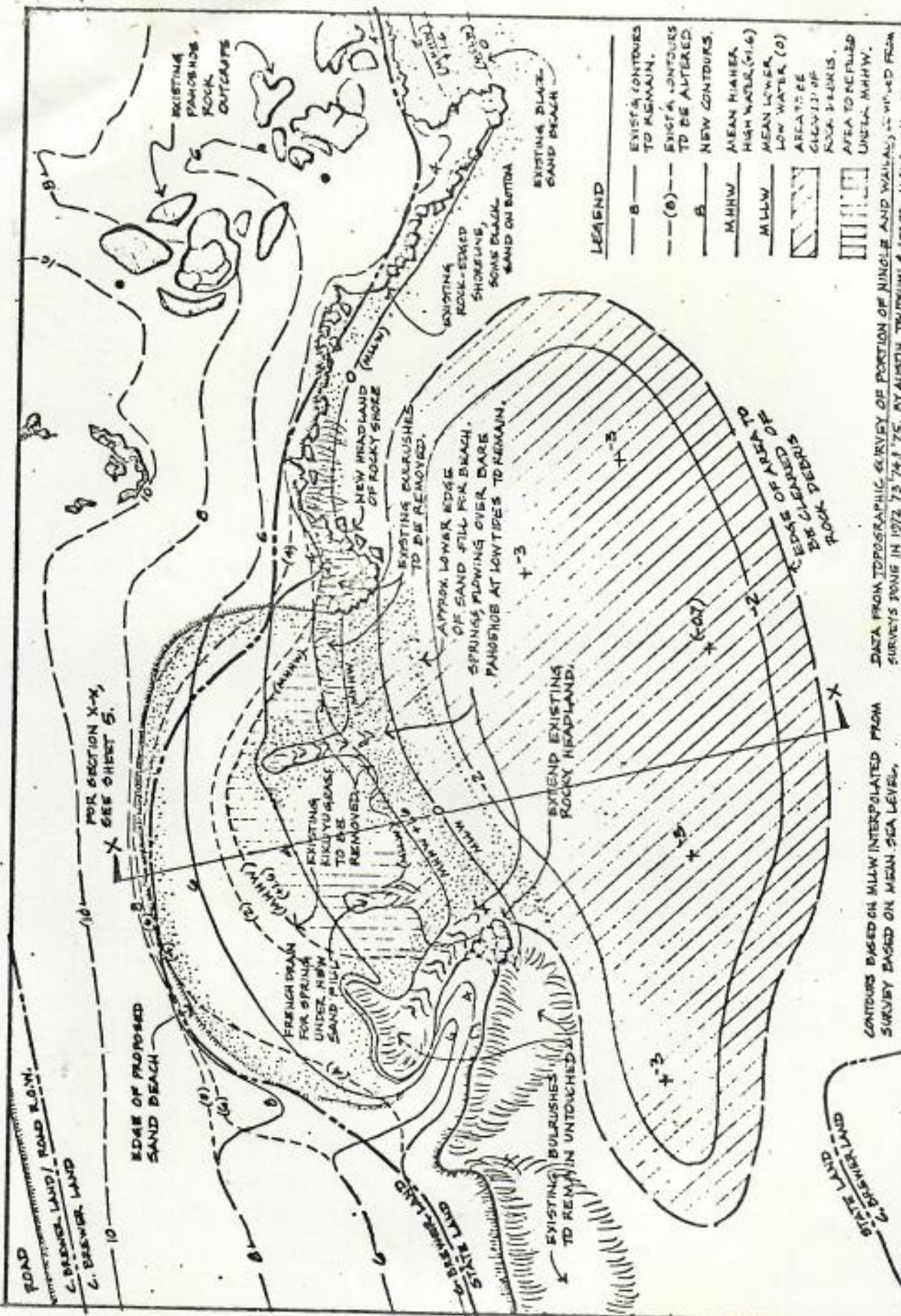


SHEET
3
OF 5

NINOLE COVE BEACH PARK
 KA'U DISTRICT / HAWAII COUNTY / HAWAII
 G. PEVIER AND COMPANY

APRIL 1978 REV JUNE 1978





LEGEND

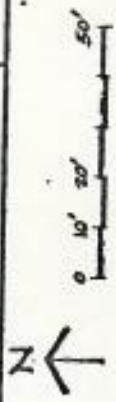
- 0 — EXIST'G CONTOURS TO REMAIN.
- - (0) - - EXIST'G CONTOURS TO BE ALTERED.
- 0 — NEW CONTOURS.
- M.H.L.W. MEAN HIGHER LOW WATER (61.6)
- M.L.L.W. MEAN LOWER LOW WATER (0)
- [Hatched Box] AREA TO BE CLEARED
- [Hatched Box] AREA TO BE REPLANT'G UNDER M.H.L.W.

SHEET 4 OF 5

CONTOURS BASED ON M.L.L.W. INTERPOLATED FROM SURVEY BASED ON MEAN SEA LEVEL.

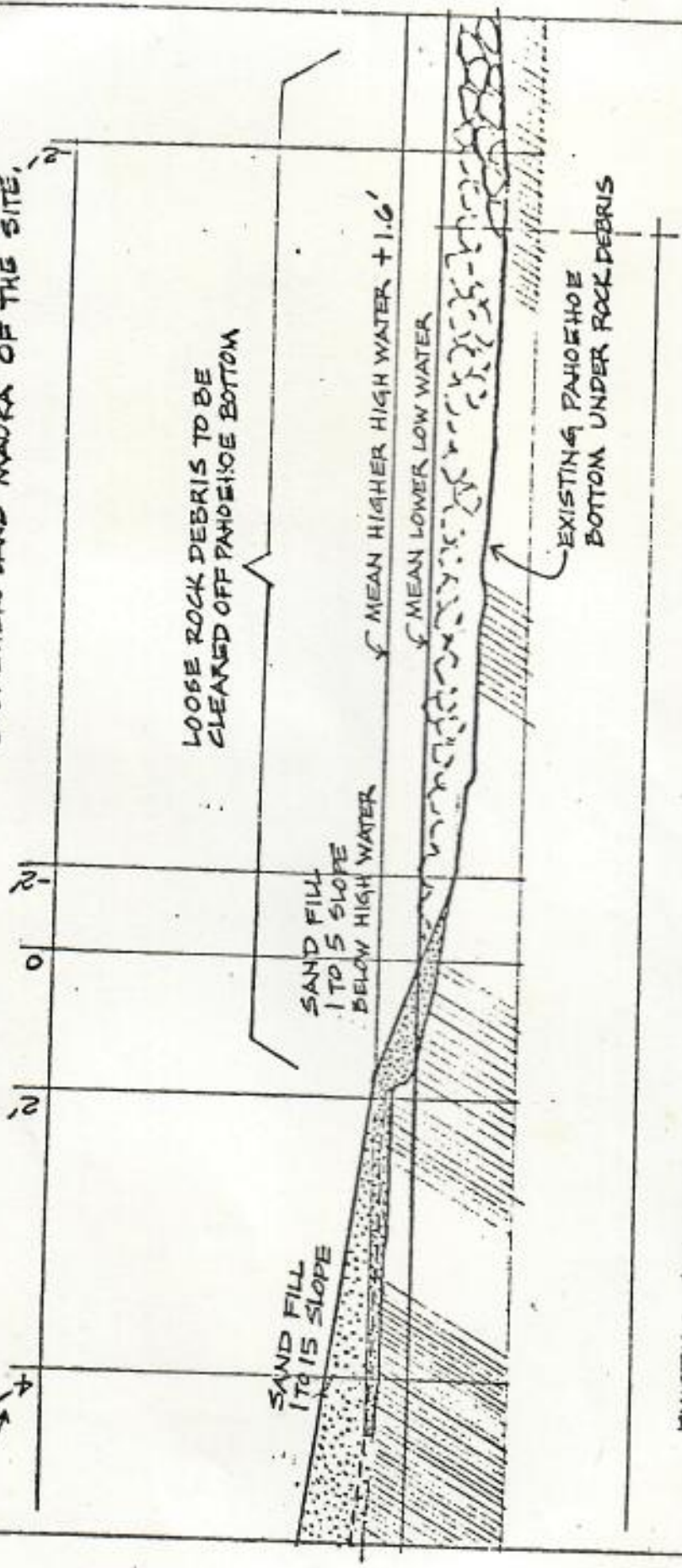
DATA FROM TOPOGRAPHIC SURVEY OF PORTION OF NINOLE AND WAIKAI, AS MADE FROM SURVEYS DONE IN 1972, 73, 74, 75, BY AUSTIN, TRUJILLO & ADAMS, HONOLULU, AND SUPPLEMENTED BY FIELD OBSERVATIONS BY C. BREWER PERSONNEL & LANDSCAPE ARCHITECT.

NINOLE COVE BEACH PARK
 KA'U DISTRICT / HAWAII COUNTY / HAWAII
 C. BREWER AND COMPANY APRIL 1976



ROCK DEBRIS TO BE REMOVED = APPROX. 1100 CYD,
 SAND TO BE PLACED IN AREA
 UNDER MEAN HIGHER HIGH WATER = APPROX. 200 CYD,
 ROCK FILL (AT ENDS OF BEACH) = APPROX. 40 CYD,
 DISPOSAL AREA FOR ROCK DEBRIS IS ON
 C BREWER LAND MAUKA OF THE SITE.

NEW SURFACE CONTOURS



EXISTING CONTOURS
 TO BE CHANGED.

SECTION X-X

SEE SHEETS B & 4 FOR PLAN LOCATION

SCALE:
 VERT. 1" = 10'
 HORIZ. 1" = 20'

NINOLE COVE BEACH PARK
 KA'U DISTRICT / HAWAII COUNTY / HAWAII
 C BREWER AND COMPANY APRIL 1978

SHEET
5
 OF 5

PROPOSED SITE
FOR NINOLE COVE
BEACH PARK

ALTERNATE (A)

MOST OF TOP TO GULL,
BEACHS ALGAE PROBLEM
WATER AREA VERY LIMITED

ALTERNATE (B)

WIND AND WAVE - SWEEP,
ACCESS DIFFICULT

ALTERNATE (C)

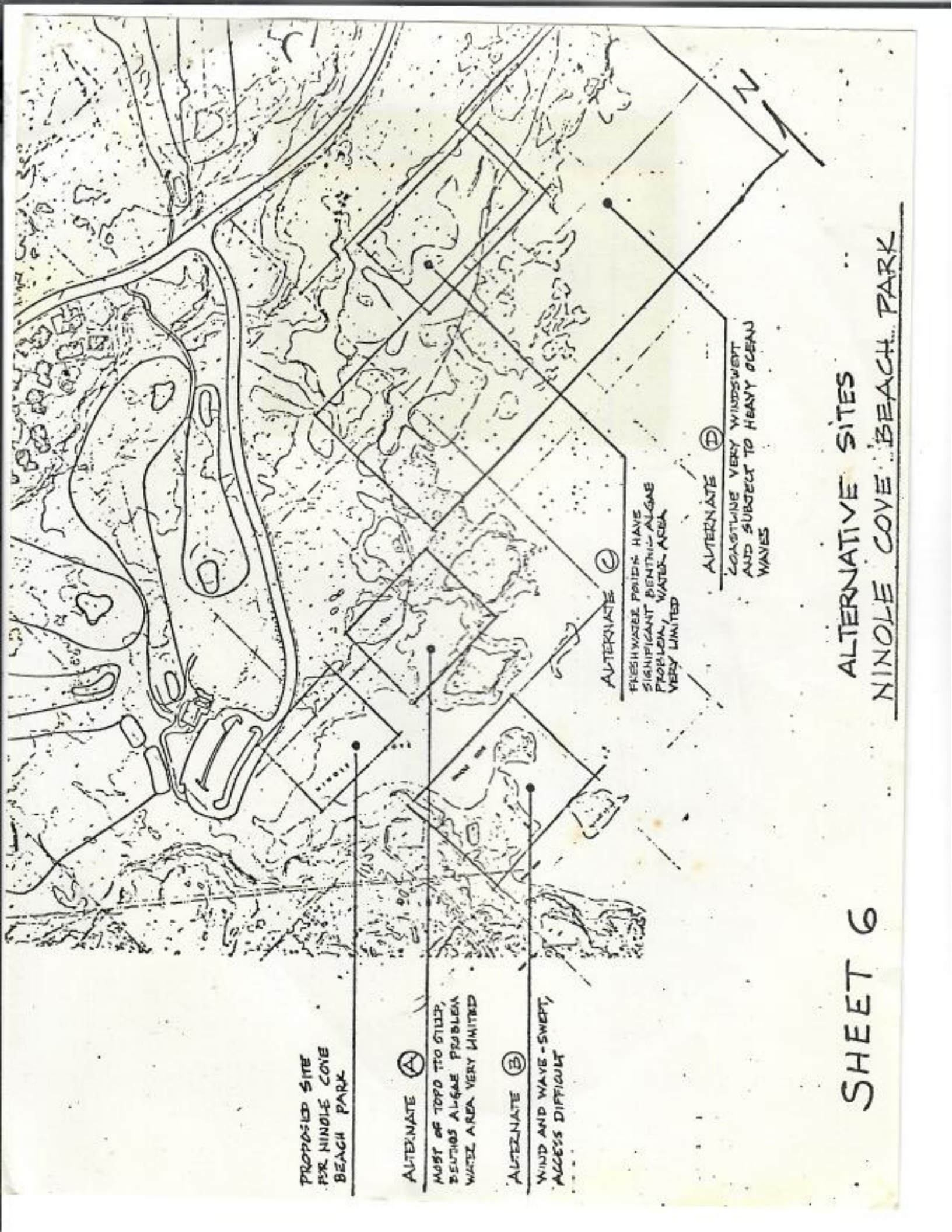
FRESHWATER POND - HAVE
SIGNIFICANT BENTHIC ALGAE
PROBLEM, WATER AREA
VERY LIMITED

ALTERNATE (D)

COASTLINE VERY WINDSWEEP
AND SUBJECT TO HEAVY OCEAN
WAVES

SHEET 6

ALTERNATIVE SITES
NINOLE COVE BEACH PARK



Hearing on Ka'u park plan

PAHALA, Hawaii — The Army Corps of Engineers has scheduled a public hearing next month on a beach park construction project proposed by C. Brewer and Co. Inc.

Col. Peter D. Stearns, Honolulu district engineer, said the hearing will be held at 7 p.m. Jan. 25 in the cafetorium of Ka'u High School.

Stearns said the hearing was in response "to numerous comments and requests from the public."

Hawaiiana Investment Co., a Brewer subsidiary, wants to build the beach at Ninole Cove on the Ka'u coast near the company's Punalu'u resort project.

MINKOFF CO. INC. 1000 KALANANAKU AVE. HONOLULU, HI 96813

SHEET 5



EDGAR A. HAMASU
DEPUTY TO THE CHAIRMAN

DIVISIONS:
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FISH AND GAME
FORESTRY
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 621
HONOLULU, HAWAII 96809

March 14, 1979

REF. NO.: CPO-277
FILE NO.: HA-10/4/78-1101

Mr. Lawrence D. Garrett
Operations Manager
Hawaiiana Investment Co., Inc.
P. O. Box D
Naalehu, Hawaii 96772

Dear Mr. Garrett:

NOTICE OF ENVIRONMENTAL DETERMINATION

This acknowledges your letter of February 7, 1979 in reference to your Conservation District Use Application for recreational improvements at Ninole Cove, Ka'u, Hawaii, TMK 9-5-19:11.

We understand that Hawaiiana Investment Company, Inc. has withdrawn its application from the U. S. Corps of Engineers in that permission is no longer sought for the dredging of the offshore waters and development of a white sand beach.

Accordingly, to reflect the latest change, your letter now amends your proposal to include only the planting of additional trees and shrubs and the maintenance of the existing landscape and new plantings. It is our understanding that earthwork involving cut and fill operations are also deleted from your original proposal and that all activities will be confined to property owned by your company.

As a consequence, based on the application as amended, we anticipate no significant environmental effects and a negative declaration is determined for the proposed action in accordance with Section 1:30b of the Environmental Impact Statement Regulations.

3/23/79
A

Mr. Lawrence D. Garrett
Page 2
March 14, 1979

Thank you for your cooperation. Should there be any questions, feel free to contact Messrs. Roger C. Evans or Len Bautista of our Planning Office at 548-7837.

Very truly yours,

Susumu Ono
SUSUMU ONO, Chairman
Board of Land and Natural Resources

cc: Hawaii Board Member
Hawaii Land Agent
U. S. Corps of Engineers
DOH
OEQC/EOC
COH/Planning Dept.
COH/Dept. of Water Supply