

HAWAII ISLAND
FILE OF G. H. BALAZS

Turtle Fishing (Lawai'a Honu)

By Rev. Henry B. Narlimu, Hilo.

The net had openings (hakahaka), with the meshes (kā maka) perhaps a foot wide (hookahi kapu'ai (foot) paha (perhaps), and forty (kanahā) fathoms (-anana) the length (ka loa). There were two canoes (elua waa). Unite (hohui) the heads (na poo) of the nets, two nets (elua upena) ma kahi (about) eighty fathoms (kanawalu anana) long, perhaps a hundred fathoms (hookahi (one) haneli anana). There was a watchman (he kilo) above on the cliff (-iluna - o kā pali), and it was his duty (-a rana) to separate (kahikahi) and move apart (hoonee - ai) the canoes (na waa). At the time (-i kā mānawa) that the fish watchman (he kilo - ai) saw (-ua ike 'oia) the turtle (-i ka honu) he signaled with his hand (pe'ahi 'oia) to the two canoes (-i na waa elua) to move (e nee). He opened up his arms (wehe 'oia -i kona lima) at the time that he saw (-i ka mānawa -i ike - ai) that the turtles were right where the canoes ~~would go~~ ^{went} (-ua kupo na honu -i kahi - o na waa i hele - ai), When he opened his arms (-i kā wehe 'ana - o kona lima) they let down the net (hookua lakou -i kā upena). The canoe men would beat the sea with branches (me ka laau -i hoopūhū - ai - iloko - a ke kai (laau, timber, wood, tree). Then the turtle (s) would go to where the net was

Alaila holo kā honu i kahi o kā upena²
They would leave the net (haalele ka upena),
leave it with a float (mou, buoy) (me kā mo
e haalele ai), and with the rope of the upper
selvage holding the net (-a me ke kāula o kā
'aliki e paa ana i kā upena) The line (word both
like Fine) and the heads of the turtles tangled.
There was a piece of wiliwili wood (he laau wiliwili
(a branch?), a piece of han wood (he laau hau),
and an 'uli'uli (a gourd that was planted (he
-ipua i kama ia), and grew (-a ulu mai), and
dried (ia mālo), and was held fast in a cala-
bash net (-a hoopaa ia i ke kōkō), and float-
ed in the sea (-a lona iloko o ke kai) - the
'uli'uli. The canoes went toward the upland
(holo na waa mauka) to that and this outer
corner of the float (ma kela keia kahi o kā mou)
and beat the sea (-a hoopāhū i ke kai), and
the turtle(s) went off (-a holo kā honu). And the
net was gotten and pulled in (a kii kā upena
-a huki); The meshes of the net were perhaps
a malewa (wide enough to put the hand through)
The fishing watchman saw the turtle(s) floating
on the surface of the sea (Ike ke kila i ka honu
e lona ana iluna o kā ili kai) There are
turtles in Ha-mākua and Puna off the coast. They
used to use a spear (he o) from the haales, not the
ancient Hawaiian spear. There was only the net i
ancient times (kā upena wale no ka wa kahiko)
I have not seen the small net (kōla au i ike i kā
upena lili) -



University of Hawaii at Manoa

Hawaii Institute of Marine Biology
P.O. Box 1346 • Coconut Island • Kaneohe, Hawaii 96744
Cable Address: UNIHAW
December 20, 1982

Mr. John Clark
P.O. Box 661
Kailua, HI 96734

Dear John:

The following information represents a brief summary of my views on what would be important for you to mention, and not mention, about sea turtles in your forthcoming book on the Big Island. Please feel free to telephone me, or meet with me in person, if you would like to cover any of these points in greater detail.

With respect to sea turtles nesting on the sandy beaches of the Big Island, I suggest that you describe this activity in general terms without specifically identifying the beaches involved. You could point out that this nesting is only known for the hawksbill turtle, and that it occurs at a low level at several beaches scattered around the island. You might also ask any reader who comes across a nesting turtle, or evidence of nesting (tracks, diggings, hatchlings) to please write to you describing the observation. It would also seem appropriate to point out that all sea turtles and their nests are fully protected by state and federal wildlife laws.

With respect to sea turtles feeding and sleeping within the nearshore waters of the Big Island, I suggest that you specifically identify several of the key (critical) locations, and mention that they have great potential for designation as sea turtle sanctuaries. You might also comment on the fact that some tagging research has been conducted on the turtles at these sites. The sites that I recommend you mention are 1.) Kiholo Bay and the connecting mixohaline pond, 2.) Ninole Cove and the coastal waters extending north as far as Kamehame Point, and 3.) Kalaulalu Bay and the coastal waters extending for about one mile to the south. As you are already aware, it is principally the green turtle that feeds and sleeps within these nearshore waters. This species is a migrant breeder that regularly travels to French Frigate Shoals in the Northwestern Hawaiian Islands. Additional general information on Hawaii's green turtles can be found in my recent article in Hawaii Fishing News.

If you wish, I would be happy to read through your section on sea turtles and offer any needed comments.

Best wishes for the Christmas season and the New Year.

Sincerely,

George H. Balazs
Assistant Marine Biologist
(1982-82 contract with NMFS)

UNIVERSITY OF HAWAII
Hawaii Institute of Marine Biology
Coconut Island • P. O. Box 1346 • Kaneohe, Hawaii 96744

→ 9928

February 20, 1980

Telephone No. 324-1295

Mr. Robert Hines
P. O. Box 1149
Kailua-Kona, Hawaii 96740

Dear Mr. Hines:

You will probably recall that I telephoned you during early September of 1978 concerning my research program of Hawaiian sea turtles, and my interest in conducting a short study at Kiholo. At that time you indicated your willingness to provide me with the gate key for the access road to Kiholo. I am hopeful that this kind offer still exists in that I would like to now plan a study visit for March (11-14th) or March (18-21st). Would either of these time periods be inconvenient for your schedule, or possibly activities that may be taking place in the Kiholo area? My work would involve only two people, myself and my research assistant, Mr. Alan Kam. We would anticipate bringing a small camping tent and staying at Kiholo in an out-of-the-way location for the four nights of the study visit.

Your assistance in this matter will be greatly appreciated. I look forward to hearing from you when your time permits.

I have enclosed two articles on sea turtles that I thought you might find interesting.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk
enclosures

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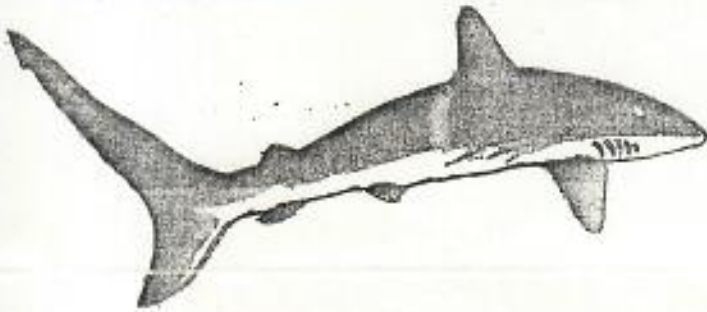
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UH HILO MARINE OPTION PROGRAM NEWSLETTER



September 8, 1983



Welcome to a new semester at U.H.H. There are many events and new projects to be informed and get excited about. With all these new activities, we intend to keep you abreast with a monthly UH-Hilo M.O.P. newsletter.

FIRST BIG EVENT

Our first activity is an orientation get-together, Friday Sept. 16th in the Life Science quadrangle from 4:30pm on. Refreshments and pupu's will be served. We encourage you to come and meet the faculty and fellow Moppers.

NEW PROJECTS

All those Moppers interested in the Turtle project, please come in and read the literature on the project. We also have other turtle related information. Familiarize yourself. It is important you have an understanding of the on-going research involved in the project before being considered as a participant. George Balazs will meet with students 4:30pm Monday Sept. 12th in L.S.15.

We also have other marine related literature in the office. Feel free to stop in and browse.

ON-GOING PROJECTS

For those of you unaware, each semester M.O.P. establishes and maintains a 160 gal. aquarium on the third floor of the Campus Center. Presently the aquarium is empty. Volunteers are invited to help with the water collection and fish acquisition. If you are interested contact the M.O.P. office for all the details.

We are also recruiting volunteers to paint a large blue multi-hued wave on the M.O.P. building. Sign Up. 😊

FOR YOUR INFORMATION:

M.O.P. maintains the bulletin board in Wentworth Hall, by the soda machine. Current issues of Seawords, the all campus M.O.P. newsletter, will be posted bi-monthly, along with current activities and other items of interest. Check this board to keep abreast of all up-coming events.

SCUBA INSTRUCTION

There will be a M.O.P. sponsored open-water SCUBA class tentatively to be offered over Thanksgiving break. Those interested should sign up at the M.O.P. office.

DROP-BY!

All Moppers from Spring 1983, drop by and update your file. There have been some questions about the skill project; realize that as you become more familiar with the Marine Option Program and your insight and curiosity increases, many ideas for possible projects arise. We've also compiled a list of possible projects and its on the M.O.P. bulletin board.

GET INTO IT

This semester M.O.P. will sponsor several excursions to enable students to get out and get in the ocean. Yeah!

- Beach party down at Bay front--with sailing adventures and a barbecue.
 - Ho'olaulea- a week-end to camp at Spencer's Beach Park. Swim, dive, sail, fish, snorkel, everything.
 - A day of trolling and bottom fishing.
- Dates to be announced.

OUR OWN RESEARCH VESSEL

UHH M.O.P. thanks Mr. Clarence E. Andrade, a former teacher and administrator at HCC, for the Patti Jo. She's a 20 foot, hand built fishing vessel, outfitted with electronic equipment, fishing gear, and a trailer. The boat was donated by Mr. Andrade; miracles really do happen. Let's keep up the momentum!

FINAL NOTE:

Remember Moppers, if you have any questions or suggestions, please stop by the M.O.P. office. Let's all have an enjoyable and productive semester.

See you at the party,
Aloha,

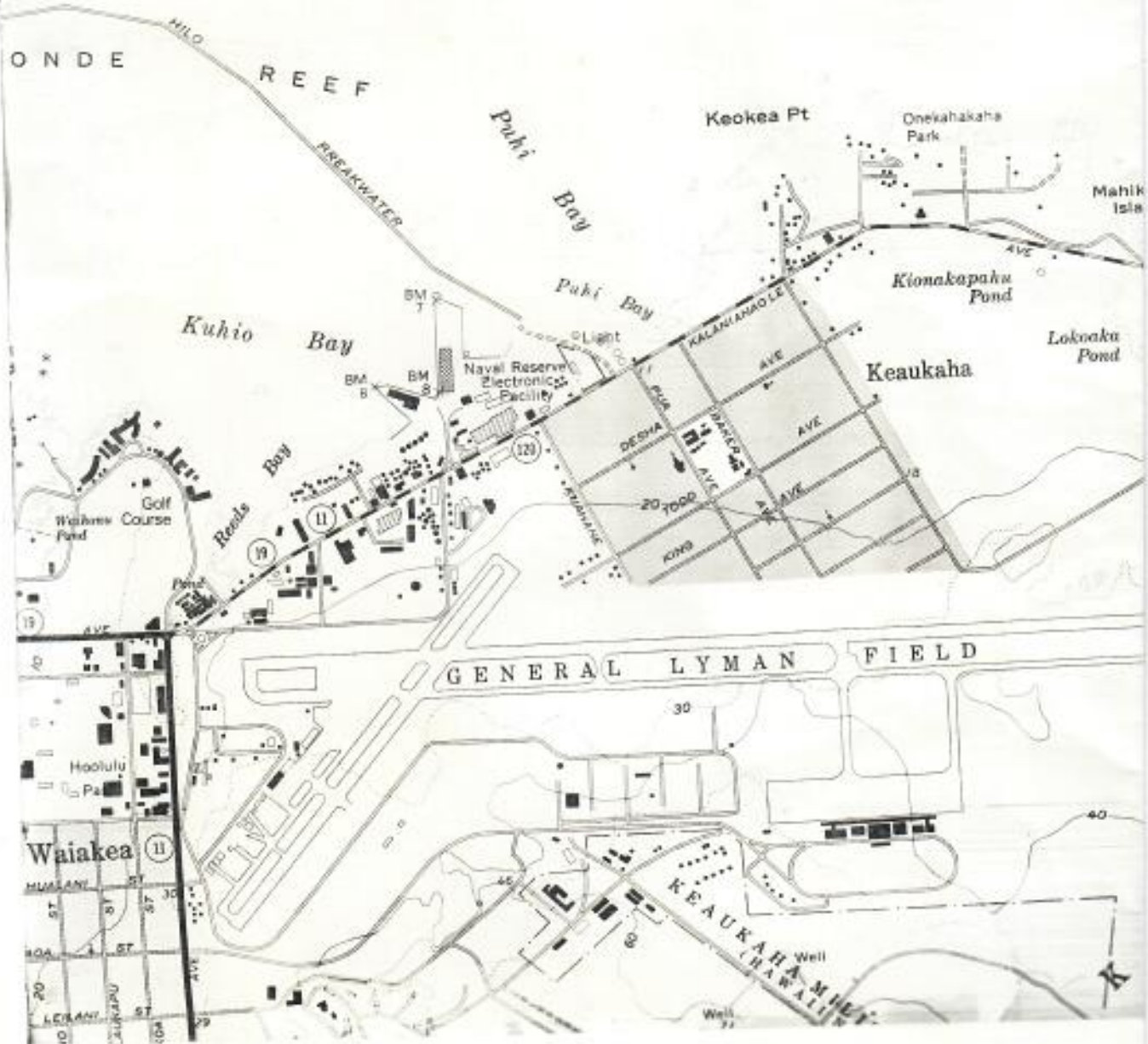
Nancy and Diane

Nancy Diane

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ONDE

HILO REEF
BREAKWATER

Puki Bay

Keokea Pt

Onakahakaha Park

Mahik Isle

Kionakapahu Pond

Lokoaku Pond

Kuhio Bay

Puki Bay

Keaukaha

BM 7

BM 8

Naval Reserve Electronics Facility

Light

KALANIANA'OLE AVE

DESHA AVE

207000

KING AVE

Golf Course

Waikane Pond

Roads Bay

GENERAL LYMAN FIELD

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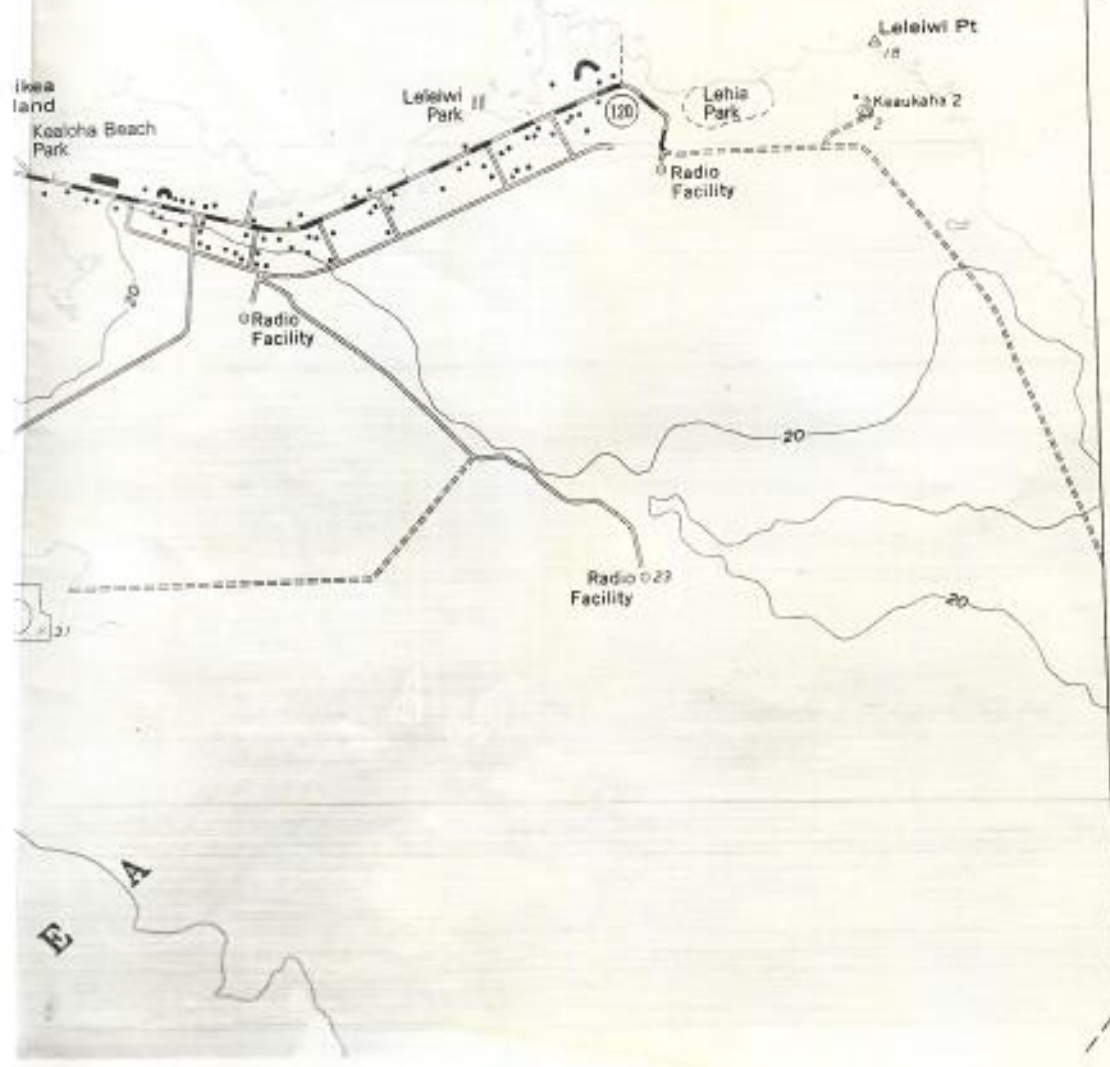


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REPORTS FROM UHH, MCC, WCC & MORE

Seawords

News of the Marine Option Program
ISSUE 16 OCTOBER 28, 1983

University of Hawaii

HILO HAPPENINGS

By Denise Cordova, UHH MOP student

The Fall '83 semester is upon us now and we would like to welcome everyone back. We have 27 new students in MOP at U.H.H! An inauguration party was held on September 16, 1983. We had a super turnout with both old and new MOPers.

While at the party, major projects for the '83-'84 academic year were discussed. Among the projects is a major study of green sea turtles. The objective of this project is to study the population growth and developmental habitat requirements in their nearshore foraging pastures. Mike Slaughtery and Leslie Kaholooa are developing another project which involves a detailed business model for the independent fisherman.

Ijeva Brambridge will be researching a freshwater prawn, *Macrobrachium rosebergii*. She is interested in opening a commercial aquaculture operation and is now working on a feasibility plan.

In association with Dr. Richard Young from UH Manoa, Dr. Leon Hallacher, Michael Baldonado and Steve Fukunaga will study squid off the highly productive eastern Hawaiian coast. Their work, being done by UH, University of Hokkaido in Japan, and the National Marine Fisheries Service, hopes to determine the importance of squid as a dietary base for tuna.

Another new project this year is reporting the MOP news from our UHH campus and corresponding with Seawords. Denise Cordova is looking forward to interrelating the interests of our MOP students.

At this time we would like to recognize the new MOPers. They are the following: John Woertendyke, Bruce Matthews, Sheila Mahony, Deborah Kaluna, Richard Lancki, Darrell Kuanoo, Trevor Jackson, Doreen Johnson, William Harlan, Diane Guerriero, Chris Doll, John Coney, Michael Baldonado, Ijeva Brambridge, Deborah Pooler, Robin DeMeo, Wendy Geyer, Leslie Kaholooa, Mike Slaughtery, Kimberly Bailey, Kevin Lau, Loretta Mazarakis, Steve Fukunaga, Mark McLaughlin, Barbara Brooks, and Dawn Minan.

OAHU MOPicnic



It's time to picnic! MOP will be having a picnic at Kualoa Beach Park on November 20 (Sunday). We hope everyone blocks that day off their calendar as we expect to have TONS of FUN! Join us if you can, call 948-8433 and talk to Dave or Annie for more details.

MAUI MOPER VISITS BUCK ISLAND

By Lois Yamamoto MCC MOPer

This past summer I was fortunate to visit an underwater trail in the Caribbean. Called Buck Island Reef Underwater Trail, it is one of the features that travel magazines and tourist brochures recommend visiting if you should happen to be in the U.S. Virgin Islands. Especially if you're on the island of St. Croix as I was.

Buck Island, an uninhabited island four miles northeast of St. Croix, became a territorial park in 1948. Then, a presidential proclamation in 1961 made Buck Island and its surrounding coral reefs a National Monument, (a total of 880 square acres are maintained by the National Park Service.) Their headquarters are in Fort Christiansvaern, a historical site in the harbor town of Christiansted, St. Croix, seven miles away.

Here also are moored most of the Buck Island boat operators. Walking along the wharf, you have a choice of going on an all-day sail, motor-boating to the UW trail, picnicking, or having a barbecue at sunset. Prices range from \$18 to \$25, which usually includes snorkeling gear and lessons for beginners. The trail itself is exclusive to snorkelers, but some companies arrange SCUBA diving tours to other parts of the island. The Reef Queen, the company and name of the boat that I chose, offered a catamaran sail at sunset in addition to a glass-bottom cruise to Buck Island.

The morning I stepped onto the Reef Queen was warm and sunny. On the way, most of us rubbed on suntan lotion while everyone had a chance to choose snorkeling gear. The first mate then gave an expert and entertaining lecture on snorkeling before we arrived at a serene bay on Buck Island's west end. There, we could either practice snorkeling in the calm waters or lie on the white sand beach in the warm sun. Then it was on a 10-minute ride along the southern coast and through the lagoon's entrance to Buck Island's "boat parking lot."

Commercial activity in the park is regulated by the National Park Service whose rangers patrol the area on a regular basis. Commercial vessels' mooring time is limited to one hour and fifteen minutes (there's no limit for private vessels), and the guided snorkeling tours are limited to six persons at a time.

(cont'd. on page 2)

**UHM Celebrates
National Higher Education Week**

Welcoming Remarks of Chancellor Anderson at the Marine Sciences Building Event on Tuesday, October 4.

Thank you, Dick. Good evening, ladies and gentlemen. This event was planned, initially, to celebrate National Higher Education Week.

In the early planning stages of the celebration, the theme, "Our Commitment to Hawaii's Future," was arrived at, and with it the idea of holding similar activities as tonight's in order to familiarize the public to the various disciplines of your University and the UHM campus and the important role these disciplines play in the educational, social, economic, cultural and political life of our state.

The Marine Sciences Program as a major and significant discipline has fulfilled the various roles by initiating research efforts which have resulted in the development of much new knowledge and has been responsible for the increase in marine awareness in the state, and also the significant economic benefit to the state.

No single area of research at the University more clearly illustrates the vision of our academicians (scholar, scientists) than in the role they played in aquaculture. Long before "aquaculture" became a popular and familiar word, researchers began the exacting task of screening and studying species which had traditional significance and commercial value to our citizens. While the focus was on very localized species, researchers were well aware that the ecosystems, culture, and traditions of Hawaii reflect those of island communities throughout the vast area of the Pacific. Thus, the potential market for the knowledge developed in the Marine Sciences Program will have similar impact not only on Hawaii, but also on the greater Pacific region.

Another aspect of marine resources development lies in its interdisciplinary aspect. As an example, research in prawn production involved a number of studies done by various departments: "The development of Feed Management" by the Animal Sciences Department, "Aquaculture Engineering" by Agricultural Engineering, "Benthic and Water Column Microbial Activities" by the Department of Oceanography, "Chemical Sensory Feeding Biology" by HDMB, and "A Bioeconomic Model for Fresh Water Prawn Production" by the Department of Agriculture and Resource Economics.

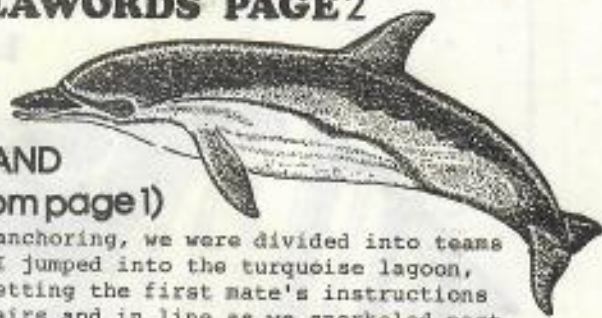
Other areas in marine activities bring into play other Manoa campus units, such as "Marine Metabolites as Potential Pest Control Agents" by the Chemistry Department; "The Development of Marine Toxins" in Pathology; "Gas Bubbles" studies by Physics and Astronomy; and "Ecological Assessment of Bacteria in Water Environments" by the Water Resources Research Center.

The first decade of marine sciences in Hawaii has been an extremely significant factor in the development of the state's expertise in marine fields and its concomitant scientific talent.

The next decade--and the years following--will see increasingly sophisticated applications of science to support state and national goals for the Hawaiian archipelago and surrounding waters. In fulfilling its "commitment to Hawaii's future", marine sciences will continue to offer solutions to problems while meeting the needs in Marine education, research, and advisory services to the state, the nation and the Pacific region.

In fulfilling that commitment, the University of Hawaii at Manoa will continue to offer its support; and wishes the various marine sciences programs continued success.

Thank You.



**BUCK ISLAND
(Cont'd. from page 1)**

So, after anchoring, we were divided into teams of six, and I jumped into the turquoise lagoon, quickly forgetting the first mate's instructions to stay in pairs and in line as we snorkeled past the other vessels moored there.

"Stay together," called out our snorkeling guide. He was swimming backwards to look at us from the front of our small group.

"Oops!" I thought, knowing he meant me. I fell into place, trying not to bump into my assigned buddy, a young girl from Puerto Rico. I took a deep breath and went down instead of left or right.

"Very nice," I thought. "Pretty. Different corals. The sergeant major here has more yellow...."

As soon as we reached the first marker to the trail, the regiment relaxed noticeably, and the scenery changed. My mute comments were now more like: "Wow! a school of blue fish!...Oooh, look at that...!"

It was an underwater jungle--an exciting panorama of visual textures! The many different corals were rough and rugged, small and lacy, round and grooved long and slender. The outstretched "branches" of elk-horn corals were like trees in a forest while the massive brain corals were like grooved boulders, and sea fans and gorgonians (colored soft corals) waved in the currents on the ocean floor.

The fishes (blue tang, yellowtail snapper, blue head wrasse, smooth trunkfish, Bermuda chub, stop-light red parrot, yellowtail damselfish, and many more) went about their business as if we weren't there--just another bunch of tourists passing through their home town.

There was so much to see and marvel at in the 750 feet of the trail. And it was enjoyed by everyone whether free-diving or snorkeling at the surface with a flotation vest on.

Blue 10" x 16" plate-glass markers set in concrete rested on the ocean floor 12 feet or more below the surface. Some signs simply pointed arrows to the next marker. Others had large white letters, clearly visible from the surface, with messages like: "Things underwater look 25% larger and closer;" and "What would you name this coral? You are right. Brain coral."

The sand that settles on the signs due to wave action is brushed off daily by the rangers. Algae is scraped off every four to six weeks. Installed in 1977, the markers still look new. Rest floats at the surface also have signs on them.

The unbroken corals on the unlit trail were a sharp contrast to the large amount of litter I'd noticed at other beaches and roads on St. Croix. I recalled Supervisory Park Ranger Felix Revello explaining that the island's "inaccessibility (except by boat) also protects it" from litter, vandalism, and poaching. Fishing and the removal of any natural features is against park rules.

Buck Island, with its rich and diverse "underwater garden," came to mind recently as I snorkeled with the Maui MOP reef survey team at Olowalu, the proposed site of Hawaii's first underwater trail. In the next issue of Seawords, I will discuss the Olowalu site.

* MORE MAUI NEWS ON PAGE 3 !! *

By Allison Chun, UHM-MOPer

Preliminary work for the underwater trail proposed for Hanauma Bay has finally gotten underway. The trail would ideally be a set of underwater plaques displaying the various marine organisms found in the bay. Before the plaques can be installed, however, research must be done on plaque design and methods of installation, the types of marine life present in the designated area, and frequency of its use by both locals and visitors.

October 23rd saw the first Hanauma Bay user survey and potluck picnic. Participating were three dedicated MOPers, Laurel Buck, Allison Chun and Lori Kishimoto, led by Leeward MOPer Robert Erwin. Also assisting were two friends of MOP (FOM), Dave Dexter and Anne Gasparini who are visiting students from New York.

After setting base camp up beneath a shedding banyan tree, our surveyors got right to work. Lori and Allison stationed themselves right by the showers and restrooms and "ambushed" unsuspecting beachgoers there, while Robert and Laurel (our Japanese interpreter) interviewed people by the steps at the base of the hill.

People were questioned concerning frequency of use, reasons for using Hanauma, and specific interests concerning the flora and fauna within the calm, clear waters of the bay. Most users expressed an interest in learning more about the bay and seemed especially interested in its fish life, history and geology. When asked what sort of marine life they were most interested in (choice of fish, coral, turtle or shark) a common answer was "What, SHARKS in the bay???"

Over a fantastic potluck lunch of Kal-bi, Allison's delicious yogurt fruit salad and musubi, we discussed some of the more interesting responses

A Sunday Survey Success

we received. One person surveyed by Laurel was somewhat disappointed when he realized that he wasn't going to get free hamburger certificates for completing the survey (as was promised him as a joke by a fun-loving friend who had been surveyed previously). Robert, who misunderstood the situation, directed him to the nearest McDonald's, though.

One of the most interesting responses to the last question on the survey, "what did you enjoy most about the bay?", had nothing to do with the marine life or the proposed trail. It had more to do with amphibious marine mammals (the scantily clad, two-legged type of the opposite sex).

In all, it was an extremely interesting way to spend a Sunday. We met a lot of people, not only locals and mainland visitors but also people from other countries such as Barbados, Canada, Germany and of course Japan. We also got a lot of exercise, at least Lori and Allison did. Some of the people agreed to be interviewed only if we would walk with them up the hill as they returned to their cars. We ended up making several trips up and down the loooooong, steeeeeep hill!

The information obtained from the questionnaires will be used to get an idea of the feasibility of installing an underwater trail and the public's response to such a trail. The next step of the preliminary work was held on Oct. 30. The area designated for the trail was transected in order to determine the types and relative abundance of fish, coral, algae and invertebrates present in that area. This information will be used to help design the plaques. Anyone interested in helping out with any part of the underwater trail is welcome. If interested, contact Robert Erwin at 487-5202, Annie Orcutt at MSB 229 (948-8433), or Allison Chun at MSB 203 (948-6000).

Skill Projects in the Spotlight BY SJL

In the search for harmless, more efficient energy production methods, many of us assume that improved technology is the key to success.

Three years ago, UH student Alan Shigemura came up with an idea that originated from simplicity and practicality, two important qualities that are sometimes overlooked. The properties of deep ocean water, current air conditioning systems, and the need for energy efficiency were the backbone of his idea.

Briefly, Alan's idea involves the use of deep (1500 meters) ocean water as a coolant for air-conditioning systems, rather than the complicated compressed freon gas system currently popular.

If actual implementation of such a brainchild is ever to be realized, the necessary groundwork will be considerable. Obstacles such as an extensive network of pipes, which may need special insulation, are formidable. The costs of such an undertaking may, in fact, outweigh the greatly increased efficiency that Alan foresees. Current systems operate at approximately 5 to 10% efficiency while Alan conservatively estimates the efficiency of his system at 40%.

It is important to understand, however, that Alan's success with his Skill Project does not hinge on the economic feasibility of ocean-cooled air. In a sense, Alan has already succeeded because he has the desire to improve what he sees around him and the ability to explore avenues that may lead to said improvement. Regardless of the outcome, Alan will have learned, and that is the goal of a Skill Project.

MOP Leader Loses Bachelorhood

(Ed. Note: Sherwood Maynard, Director of MOP, got married to Annie Gerstl on Oct. 26. The following is a "stretched" re-creation of the ceremony.)



Dearly beloved, we are gathered here under the eyes of Poseidon, in the presence of these fishes to join this merman and this mermaid in holy matrimony.

If any man can show just cause why this aquarium will not function at proper pH, let him speak now or forever hold his peace.

Do you Annie Gerstl take Sherwood Maynard to be your lawfully wedded SCUBA buddy? To have and to hold thy SCUBA tanks, through calm water and tsunami, in high tide and low tide, from row boat to yacht, as long as you both shall live?

(And the rest is history....)



CORAL CLASS
AT UHM-NOKU
WE'LL BE
FAMOUS!



New MCC MOPers

MCC has a lot of returning MOPers this fall to welcome aboard new MOPers. The new MCC MOPers are as follows: Randy Campbell, Barbara Gray, Jamie Greenough, Michele Hamada, Greg Hoban, Barbara Jablonski, Mike Jones, Sheree Kimura, Jeff Poskin, Mary Rose, Dee Samonte, Jack Torrey, Wyatt Young and Ronald Fukushima.



By Lori Buckley, WCC Coordinator

Windward MOP is proud to announce the appointment of a student coordinator... Paul Williams. Welcome aboard Paul!! Paul will be writing Seawords entries, organizing activities, meeting with MOPers, publicizing MOP and, in general, keeping MOP in touch with the students. Bring your suggestions and ideas to the MOP office for discussion. Paul's office hours are Monday and Wednesday 1300-1600.

MOP and Hawaiian Backyard Aquaculture Program (HBAP) have had more changes with the start of fall semester. Jeff Hunt (Uncle Jeff), MOP Summer Coordinator and HBAP Principal Investigator, has been appointed Assistant Dean at WCC...congratulations, Jeff!! Because of the time demands of his new position, Lori Buckley joins HBAP as Associate Investigator and instructor of AQUA 106 (Small Scale Aquaculture). Although Jeff will retain his role of administering the HBAP grant, Lori will advise students working on aquaculture projects and manage the 21 ponds of HBAP. In addition to Jeff and Lori, HBAP includes the following students: Danny Chong, Leslie Nunes, Ron Rehkenper, Robin Ruffino, Mike Shirona and Jim Taylor.

Bob Cisneros and Ron Mori have recently submitted their skill reports on "Diseases of the Hawaiian Prawn" and on "Species Assessment and Selection," respectively. Well done! Hear, hear! Hurrah!!! This should give current HBAPers and MOPers hope and optimism for the future of their reports.

Jim Taylor, Mike Shirona, Ron Rehkenper, Robin Ruffino and Danny Chong of HBAP have had their proposals approved for a skill project on Polyculture in Backyard Aquaculture. Jim Taylor's project involves the large growout pond at HBAP and he has just collected his final data. Now it's time to compile and analyze.

From the desk of Windward's Student Coordinator, Paul Williams:

WCC's MOP lobby and lounge is growing more livable by the day, with the addition of a sofa, salt water aquarium, and a beautiful, large plant donated by Pearl Takeuchi, WCC chemistry instructor. Mahalo Pearl, I just hope that it doesn't choke from the clouds of cigarette smoke emitted by lobbyists.

In addition, over the summer months, WCC's largest backyard aquaculture pond has produced gigantic, plump, succulent prawns, carp and mullet. They were harvested on September 30th and cooked on the spot.

We would like to welcome WCC's new MOP members: Diana Manger, who is working at Sea Life Park with seal pups, surfers Daniel Barger and Will Petway, a journalist Bob Doucet, and ex-fish collector Michael Stringer who is interested in the aquaculture ponds. Leonard Deal, another new MOPer, wants to pursue a career in dolphin studies. MOP also welcomes Brian Kon and Leslie Nunes to WCC's Hawaiian Backyard Aquaculture Program. Christine Manthei was shanghaied into HBAP so that she could log HBAP data into the computer. Glenn Wood, seafood gourmet, enjoys skin diving for aquarium fish.

Job information is now available at the MOP office (Iolani 103; phone 235-0144). Here are two that you may consider:

Slow Poke Fish Market
\$3.50/hour
* * *

Hawaiian Backyard Aquaculture Program:
Aquaculture Pond Manager
Aquaculture Pond Helper

See Lori for more information.

The first MOP Iguana Safari is being planned by Paul Williams and Barry Stiles. Call 235-0144 for more information.

Savage Seafood Seacrets

Shark bites man, man bites shark! We're going to be real savages about it... about what, you may ask? The (first annual) "SAVAGE SEAFOOD SEACRETS." What is it--a new cult of marine vigilantes? No, it is the fundraiser sponsored by MOP for the Maui Transecting Workshop. On Friday, November 18, from 11 am to 1 pm, at the UHM Campus Center, MOP will have a platelunch sale of the most savagely delicious seafood this side of the Atlantic.

The platelunches will feature all sorts of seafood delicacies. We are still adding items to our menu, but so far we have tender smoked marlin (generously donated to MOP by Akala Products, Inc.), crispy lima tempura (to be prepared by our own Allison Chun using Heather Fortner's famous recipe), and of course the already mentioned Shark Bites, tasty bits of breaded shark for you to bite revengfully.

So come one, come all to the Marine Option Program's "SAVAGE SEAFOOD SEACRETS!!" Friday, November 18, from 11 am to 1 pm at the UHM Campus Center. Be there or be hungry.

Each new building on the UHM campus is entitled to some form of artwork to adorn the new structure. What ever happened to the art piece for the Marine Science Building?



SEAWORDS

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Sherwood Maynard Director 948-8433
Patty Bibby Editor 948-6000
Scott Levesque Assistant Editor 948-6000

1000 Pope Road, Room 203,
Honolulu, Hawaii 96822

SURE, THAT'S
WHAT THEY
ALL SAY





Come 'n' Get it!

In the midst of our move to new offices, a box of MOP T-shirts was found. Such designs as the 1981 Ocean Fair, 1981 Fishing Derby and the old MOP boat design are included. We have a variety of sizes and colors in both male and female styles. Several samples can be seen in the lounge, room 203, on the bulletin board. The cost for your choice is \$6 each, for male or female styles. See either Annie or Dave in room 233 to make your purchase.

* * *

It's a sticky subject, but we'll peel it off anyways. The official MOP stickers are in! They are attractive blue and white stickers with the MOP design and the words "Marine Option Program University of Hawaii" along the edges. EACH MOPER IS ENTITLED TO ONE FREE STICKER!! Stickers are available after that for one thin quarter. Get them while they are still available at the UHM MOP office, room 229.

MOP now has dive gear available to interested MOPers! Available for loan are bait buckets, goodie bags, weight belts and depth gauges. Stop in to see about checking them out for your next excursion; see Dave for more details.

Call for Coral

We are about to install our massive 100 gallon aquarium and we would like to fill it with some beautiful coral heads. Only problem is that we don't have any. So, if you are tired of worrying about your cluttering coral collection, please give MOP a call and we will be very grateful. Call 948-8433 and ask for Sherwood or Annie or Dave. Mahalo!

Congratulations & Thanks

Four UHM MOP students have been hired by Sea Grant Extension Service to work with the Aquaculture Development Program on preparing a new state Aquaculture Plan: Shirley Chang, Dean Toyama, Kellie Fushikoshi and Pau King. Some students will use this for their MOP skill project. Peter Rappa is supervising their work.

* * *

Au revoir, Marianne Lantry! She won a Rotary Foundation Scholarship for the 1984-85 school-year at the Université d'Aix-Marseille, in France. Congratulations, and "bon chance."

* * *

HEY! MYSTERY POSTER DONOR! Thanks a lot! Sherwood discovered four deluxe NASA oceanographic posters in his mailbox at the oceanography department recently and no one has come forward to accept the gratitude... so whoever you are, THANKS!!!

* * *

The UHM-MOP lounge refrigerator smells like roses! Thanks to Kuan Yuen! He spent the better part of Thursday night scrubbing and tolling, and speaking for all of us with active olfactories--MANY MAHALOS KUAN!

BOOKS

An autographed edition of *Schooners From Windward: Two Centuries of Hawaiian Interisland Shipping*, by Mifflin Thomas, now graces the SG/MOP library collection. Stop by to peruse it in the near future.

* * *

Also in the SG/MOP library collection is *Hilo Harbor*, the Hilo area comprehensive study conducted by the Army Corps of Engineers.

DATES

Ever wonder what goes "bump" in the night? Well, now's your chance to find out. The crew at MOP will be having a night snorkeling outing at Hanalei Bay on November 11 (Veteran's Day--Holiday!). Carpooling will leave the Marine Science Building at Manoa at 4 pm. If you would like to attend, contact Dave or Annie at 948-8433.

* * *

Sherwood's IS 261 will be touring the UH Hyperbaric Facility 10:30-11:45 on Thursday, November 17th. A carpool will leave from Manoa and anyone is welcome; contact Sherwood at 948-8433.

Sea in Society Seeks TA

In what course could you learn about the relationships between the drug ring in Florida, the strategic significance of the Straits of Hormuz and the boat peoples of Vietnam? There is only one course, of course, that could link the many chains of the sea in society and that is Dr. John Craven's "Sea in Society" (IS 461). Craven takes the multitude of seemingly unrelated current events and shows their historical implications in relation to the sea.

Craven is now taking applications for anyone who would like to assist him with this class in the Spring '84 semester. The position as TA would serve as a skill project and a stipend is also offered. Craven said the duties would be to charter student's progress on their reports and help out with the duplication and collection of reading materials. He also said he will not be able to hold the class unless he gets a TA.

Besides detailing current events, the most important thing students learn in the class is the complete history of a coastal area of their choice. Craven asks each student to choose a watershed where they lived and to follow its evolution throughout history.

Also, at some point during the semester, the class goes out for an overnight cruise. "So people can get a first-hand experience of the ocean," Craven said.

MOPers have always had a strong showing in this class, so become a TA and serve a valuable function in MOP. Contact Sherwood or Annie at 948-8433 if you are interested.

-PCB-

Skill Project Suggestions

All of you MOPers who have been doodling fish for all these years on your lecture notes, then forgetting your works of art, now have a chance to make good your talent and time. MOP is looking for an artist to design a mural for the wall outside our MSB offices. The design could be incorporated into a skill project. If you are interested, stop by the MOP office and talk to Annie or Sherwood about it, or call 948-8433.

* * *

Another interesting skill project now available is becoming a surf instructor for MOP. We are looking for someone interested in teaching surfing for a skill project. So all you "rippers" come in and discuss this tubular project with Annie or Sherwood. Or call them at 948-8433.

* * *

Become involved in a study of Prawn Pond Ecology! Learn to sample and analyze for sediment and water quality. The project involves labwork in the Marine Science Building and fieldwork at the world's largest prawn farm (in Kahuku). We will investigate the effects of Chinese carps in prawn ponds. This project has great potential for a Skill Project. For more details, see Sherwood or Annie at our new offices (RM 229, MSB), or call Rick Jurick at 948-8964.

ISSUE 16 OCTOBER 28, 1983 SEAWORDS PAGE 6 SPECIAL UHM-MOP EVENTS

NOVEMBER 9 & 16--WEDNESDAY:

Session II Coral and Invertebrate class for Maui Transecting Workshop participants. Call Annie or Dave at 948-8433. This class is open to the public. (UHM Campus)

NOVEMBER 11--Friday:

Night snorkeling at Hanauma Bay (Veteran's Day--Holiday!) Carpooling will leave MSB at 4 pm. Call Dave or Annie at 948-8433 if you would like to attend.

NOVEMBER 20--Tuesday:

MOP island-wide picnic at Kualoa Beach park. ALL ARE WELCOME!! Call Annie or Dave at 948-8433.

NOVEMBER 12 & 19--Saturday:

Session I Coral and Invertebrate class for Maui Transecting Workshop participants. Call Annie or Dave at 948-8433 for more information. This class is open to the public. (UHM Campus)

NOVEMBER 18--FRIDAY:

Seafood plate lunch sale sponsored by MOP at the Campus Center. Stay tuned to get hooked! (UHM event)

NOVEMBER 19--SATURDAY:

Hanauma Bay Symposium, 8:30 a.m. to 4 p.m. at UHM (MSB Room 114). A rare opportunity to learn all about the bay: its history, ecology and present future uses. Registration is \$2, \$5.50 with a box lunch. Call Sherwood Maynard (948-8433) or Ray Tabata (948-8191) for reservations.

DECEMBER 17--SATURDAY:

UHM-MOP Graduation

NOVEMBER

- 1 Tuesday: Last day to remove an "I" grade for preceding semester at UHM.
- 4 Friday: Deadline for registration for Graduate Record Examinations for Dec. 10th test.
- 5-15: Deadline for late registration for Graduate Record Examinations for Dec. 10th test.
- 8-9 Tues. & Wed.: First Aid class at Maui MOP- call Ric or Vicky at 242-5403 for details.
- 9&16 Wed.: Session II Coral & Invertebrate class for all Maui Transecting Workshop participants. Call Annie or Dave at 948-8433 for more details. Open to the public. (UHM Campus)
- 9 Wednesday: Alan Tomita and Rod Veunten will give a talk and slide show on the Northwestern Hawaiian Islands at 6:00 p.m. in the UHM MOP lounge. Potluck pupus will be served.
- 11 Friday: Night snorkeling at Hanauma Bay (Veteran's Day/Holiday!) Carpooling will leave MSB at 4 pm. Call Dave or Annie if you would like to attend at 948-8433.
- 11 Friday: Veteran's Day--HOLIDAY!
- 11 & 12: Fri. & Sat.: Oahu College and Career Fair at the Blaisdell from 9:30 a.m. to 4 p.m.
- 12 & 19: Sat.: Session I Coral and Invertebrate class for Maui Transecting Workshop participants. Call Annie or Dave at 948-8433 for more details. Open to the public. (UHM Campus)
- 13 Sunday: 8 hour Multimedia Standard First Aid course for Maui Transecting Workshop participants. A \$10.00 fee is necessary. See Annie or Dave (MSB RM 233) to sign up. The class is from 1:00p.m. to 9:00p.m.
- 14 Monday: College and Career Fair at the Kauai Surf Hotel. From 9:30 a.m. to 2 p.m.
- 15 Tuesday: College and Career Fair on Maui at the Memorial War Center. From 9:30 a.m. to 2 p.m.
- 17 Thursday: College and Career Fair at the Hoolulu Stadium in Hilo, from 9:30 a.m. to 2 p.m.
- 17 Thursday: MTS meeting; Capt. Bill Coste of the USCG will give a slide show and talk on Antarctic Experiments; Campus Center, room 203A at noon.
- 17 Thursday: IS 261 will tour UH Hyperbaric Facility 10:30-11:45. Carpool will leave Manoa-- contact Sherwood if you would like to attend. ALL ARE WELCOME.
- 18 Friday: Seafood plate lunch sponsored by MOP at the Campus Center. Stay tuned to get hooked. (UHM event)
- 18 Friday: College and Career Fair at Kona at the King Kamehameha Hotel, from 9:30 a.m. to 2 p.m.
- 19 Saturday: Hanauma Bay Symposium at UHM (MSB Room 114) from 8:30 a.m. to 4 p.m. Registration is \$2, \$5.50 with a box lunch. Call Sherwood (948-8433) or Ray Tabata (948-8191) for reservations.
- 20 Sunday MOP island-wide picnic at Kualoa Beach Park. Call Annie or Dave for details at 948-8433.
- 20 Sunday: "Sailing Sunday" on Maui. Contact Ric or Vicky at 242-5403 if you would like to attend.
- 24 & 25 Thursday & Friday: Thanksgiving--No class!
- 29 & 30 Tuesday & Wednesday: CPR classes at Maui MOP. Call 242-5403 for more information.

DECEMBER

- 12 Monday: Last Day of Classes.
- 13-17 Tues.-Sat.: Final Exam Period
- 14 Wednesday: End-of-semester party at Maui MOP! Call 242-5403 for information.
- 17 Saturday: UHM-MOP Graduation.

University of Hawaii
Marine Option Program
1000 Pope Road
Rm 208
Honolulu, HI 96822

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Identical letters, September 9, 1983, by George H. Balazs

Big Island People Contacted

1. Mr. Alika Cooper
163 Kaiulani Street
Hilo, HI 96720 - Fishing Fleet
2. Mr. Douglas Blake
P. O. Box 307
Kailua, HI 96740
3. Mr. Dexter Cate
167 Lahaina Street
Hilo, HI 96720 - Greenpeace
4. Mr. Ken Ellingwood
110 Huaalani Drive
Hilo, HI 96720
5. Mr. Dave Harrington
P. O. Box 4840
Kailua, HI 96740
6. Mr. Ken Hupp
913 Kaneolehua
Hilo, HI 96720
7. Mr. Moses Kahumoku
358 Eulani Street, #104A
Hilo, HI 96720
8. Mr. Bill Kalei
688 Kinoole Street
Hilo, HI 96720 - OHA
9. Mr. Gerald Kang
2848 Pulima Drive
Hilo, HI 96720
10. Mr. Robert Kim
236 Kanoelani Street
Hilo, HI 96720 - Punchy
11. Mr. Alfred Long
104 Alae Street
Hilo, HI 96720
12. Mrs. Ruby McDonald
75-5744 Alii Drive, #281
Kailua, HI 96740
13. Mr. Tom Nahiwa
2476-A Kinoole Street
Hilo, HI 96720
14. Mr. Robert Nishimoto
P. O. Box 936
Hilo, HI 96720
15. Mr. Howard Takata
2349 Kalaniana'ole Street
Hilo, HI 96720

~~P. O. Box 936~~
Teaches
Aquaculture
AT
U.H.

Nov. 2

Hi

Sure George will try to contact him. Should be no problem.

He thought you might find it helpful, ~~that~~ he personally know the families of the ~~two~~^{three} people he have circled

It would be no problem to contact them if your letters haven't proved fruitful.

He won't do anything besides attempting to contact Moses Kahumoku until he hear from you.

P.S. Now
I REALIZE NOW THAT I KNOW MOSES; I HAD INITIALLY THOUGHT YOU HAD MEANT HIS FATHER BUT MOSES IS AROUND MY AGE + PLAYS MUSIC LOCALLY. I SHOULD HAVE NO PROBLEM CONTACTING HIM.

Anything else 😊 Dime
Thanks FOR THE LOGS

Nov. 28, 83

Dear George
Just returned from Kona.
Lance says lots of turtles
(400 lb) around South-
point. But many openly
caught + butchered on
beaches. His girl friend
says she called Game-
warden at Kakaia-
Beach Park to report a
butchering by Hawaiians
but warden drove by
(because he is Hawaiia
too). No enforcement
over there.

I am enclosing a photo
from open market in
Valletta, Malta. Please

return it, please. I want
to keep original copies +
will have one made if
you want it. I did
not put down the price.

The clipping says Turtles
are cruelly + painfully slaugh-
tered. It announces a TV
show on German TV on 'Save
the turtles now'. There is a
bill in the Bundestag to pro-
hibit imports of turtle pro-
ducts - to be decided soon.
None is very grim.

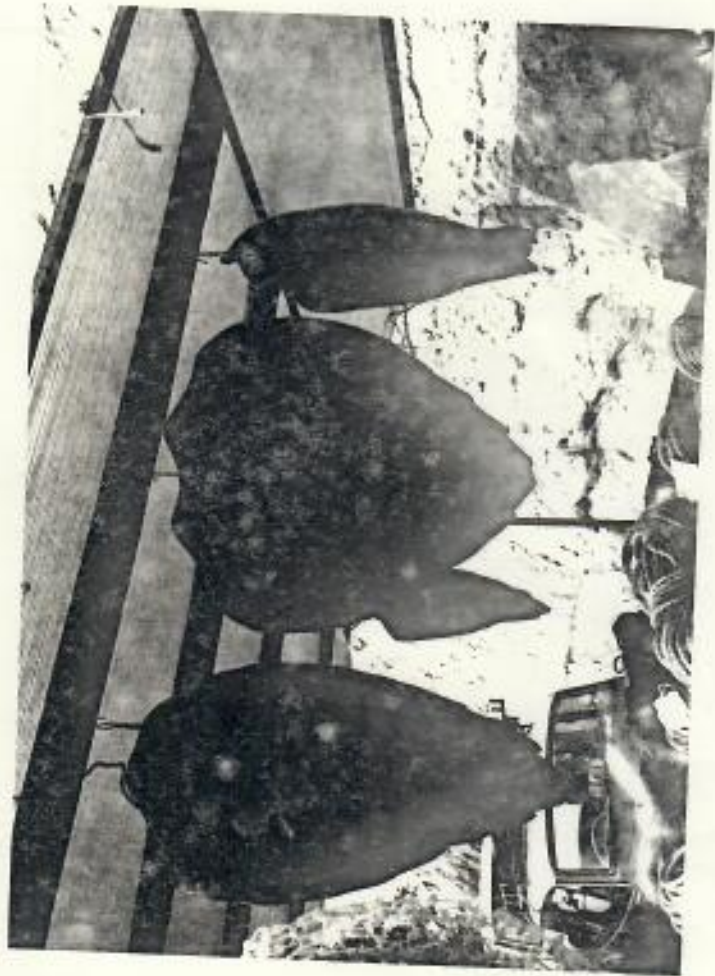
Soup + luxury eye glasses.

Aloha, Hilde.

8247 N.E. Sandy Blvd., Portland, Oregon 97220

**RODEWAY
INN**

Chumaree



Market in Valetta,
Malta Oct-Nov 83
(look like loggerheads -
scutes all striped off)



University of Hawaii at Hilo
LIBRARY

memorandum

MEMO TO: George H. Balazs

FROM: Junko I. Nowaki
Public Services Librarian

SUBJECT: Sea Turtles

DATE: 12/15/83

I am ashamed of myself to have let this sit so long. This was such a hectic first semester with so many replacement staff members to train.

I'm afraid that I don't have very many references to sea turtles to contribute to you. I am currently doing the current (1983) indexing to the Hawaii Tribune Herald and the West Hawaii Today (Kona). Hawaii Public Library in downtown Hilo will attempt to continue working on the backfiles where I suspect there may be more articles on sea turtles than now. I have let the head indexer know of your research so that they will be able to send you any references they come up with. Their computer terminal for indexing and other procedures is just being installed this week, as a matter of fact. We were doing manual indexing up to now.

Am enclosing three references from our clipping file. Unfortunately, our student help failed to date one of them but you can approximate the date from George Ariyoshi's acting governorship. Good luck to you. Our students make good use of your shark attack article in Elepaio.

A sticky wicket in Hilo: Molasses gums up harbor

By Hugh Clark

Advertiser Big Island Bureau

HILO — More than 900 tons of molasses spilled into Hilo Harbor during the weekend, state officials disclosed yesterday.

The spill of the thick sugar byproduct killed hundreds of small fish, and Hilo harbor-master Adam Vincent said it turned waters "a little dirty — sort of the color of iced tea."

Although molasses has a distinctive odor, the spill did not cause a smell problem at the pier, Vincent added.

Department of Health spokesman Don Horto said in Honolulu that Hilo officials were still investigating the "substantial" harbor spill, but there was no information yet on the overall impact on harbor waters. Vincent said environmental health officers visited the pier but did not tell him of any health problems.

Harbor crews removed most of the dead fish from the water, and port activities continued without interruption.

Vincent said the spill may have occurred any time between Thursday afternoon and

late Saturday, when it was discovered. The delay in recognizing the problem was because the syrupy material slipped to the bottom of the harbor.

Vincent said the Danish freighter Maasstad came up several hundred tons short from the total molasses discharged by Hilo Transportation and Terminal Co., which handles sugar products for three Big Isle plantations using Hilo Harbor.

Subsequently, harbor crews discovered that the molasses broke free because of a leak in an 8-inch steel pipeline between the holding tanks and valve releasing the molasses to the freighter.

The broken line should be repaired by tomorrow, Vincent said. The next molasses ship calls Sunday.

The amount of molasses lost due to the leak was described by Vincent as a rough estimate, based primarily on the discrepancy in figures between the freighter and HT&T officials.

Vincent said he did not have an estimate of the dollar loss for the molasses or of the cost of repairing the broken pipe under the pier.

AUG. 9, 83 The Honolulu Advertiser

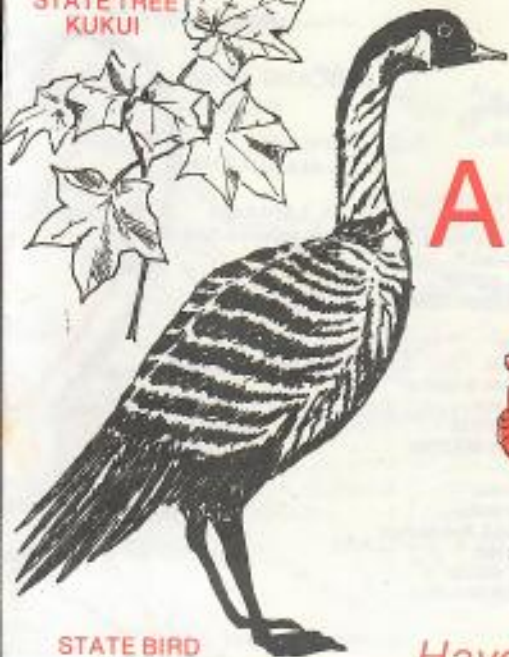
FRONT PAGE

STATE TREE
KUKUI



Welcome
to Hawaii

ALOHA



STATE BIRD
NENE

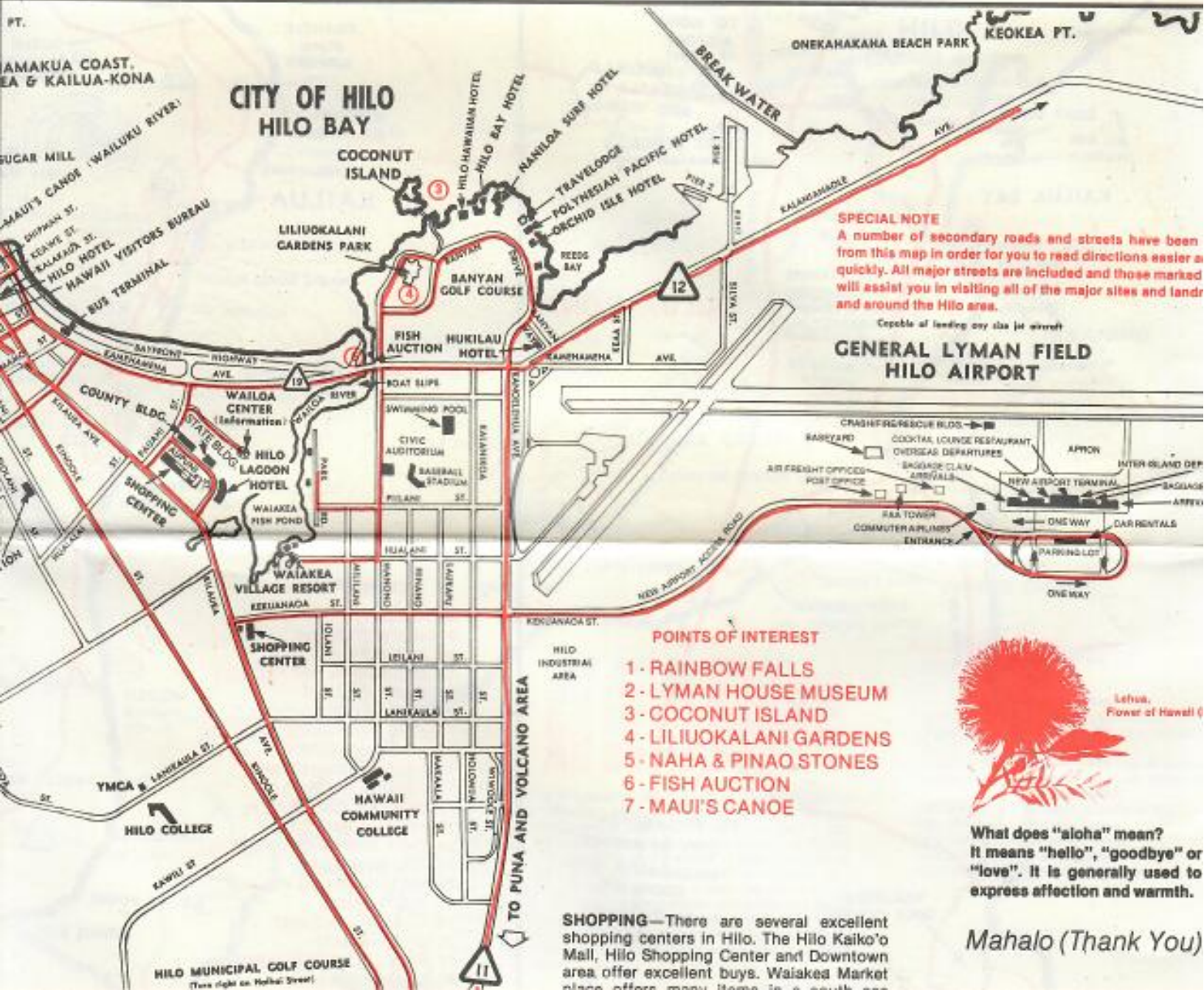


STATE FLOWER
HIBISCUS

Have A Nice Day



Compliments of
**HAWAII
VISITORS
BUREAU**

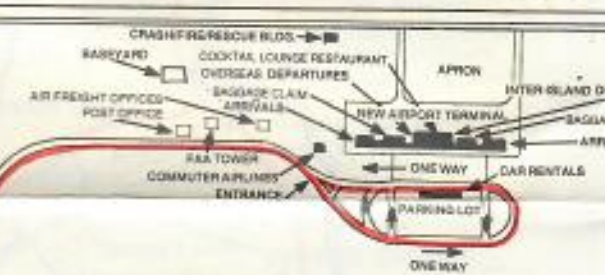


SPECIAL NOTE

A number of secondary roads and streets have been from this map in order for you to read directions easier & quickly. All major streets are included and those marked will assist you in visiting all of the major sites and lands and around the Hilo area.

Capable of landing any size jet aircraft

**GENERAL LYMAN FIELD
HILO AIRPORT**



POINTS OF INTEREST

- 1 - RAINBOW FALLS
- 2 - LYMAN HOUSE MUSEUM
- 3 - COCONUT ISLAND
- 4 - LILIUOKALANI GARDENS
- 5 - NAHA & PINAO STONES
- 6 - FISH AUCTION
- 7 - MAUI'S CANOE



Lehua,
Flower of Hawaii

What does "aloha" mean?
It means "hello", "goodbye" or "love". It is generally used to express affection and warmth.

Mahalo (Thank You)

SHOPPING—There are several excellent shopping centers in Hilo. The Hilo Kaiko'o Mall, Hilo Shopping Center and Downtown area offer excellent buys. Waiakea Market place offers many items in a south sea

PLACES TO VISIT AND SEE

RAINBOW FALLS - One of the finest waterfalls on the island. It's the legendary home of the Goddess Hina, mother of Maui. Gets its name by the sun casting a rainbow on the waterfall spray. Up Wai'ale'ale Ave. keep to the right and watch for the marker.

LYMAN HOUSE MUSEUM - 276 Halli St. Old missionary home built in 1839. Completely restored. Adjacent Museum houses excellent collection of Hawaiian artifacts.

WAIPIO VALLEY LOOKOUT - At the end of route 24, past Honokaa. Called "Valley of the Kings," was once occupied by several thousand Hawaiians. Taro farming (from which Hawaiian Poi is made) is still grown. Valley floor is accessible only by foot or four wheel drive.

AKAKA FALLS - One of the most spectacular water falls in the state. Located 15 miles north of Hilo on route 19 to Honouliuli, then up route 22 to the end. A lush tropical park of some 96 acres overlooking the 400 foot waterfall. Main waterfall drops over 420 feet.

PARKER RANCH - The second largest cattle ranch under American flag. In the town of Waimea is the Parker Ranch shopping center including a fine museum. From Waimea you can drive up to northern end of island believed to be birthplace of King Kamehameha the Great with a beautiful statue in the town of Kapapa.

MOKUAIKAU CHURCH - In the beautiful town of Kailua-Kona. Reported to be one of the oldest churches in Hawaii and reflects the influence of the New England missionaries. Visitors welcome.

HULIHEE PALACE - Summer home of Hawaiian Royalty. Beautiful visitor exhibits.

COFFEE—Kona is the only area in the USA where coffee is grown commercially. Coffee Co-op coffee mill is on the Napoopoo Road and welcomes visitors.

KEALAKEKUA BAY - Site of Captain Cook monument where he was killed.

CITY OF REFUGE - National historical park. Where early Hawaiians came as a refuge and sanctuary. Was maintained by the Hawaiian priests (Kaiunua). It has been an ancient beauty where visitors can see how Hawaii lived and looked in ancient times.

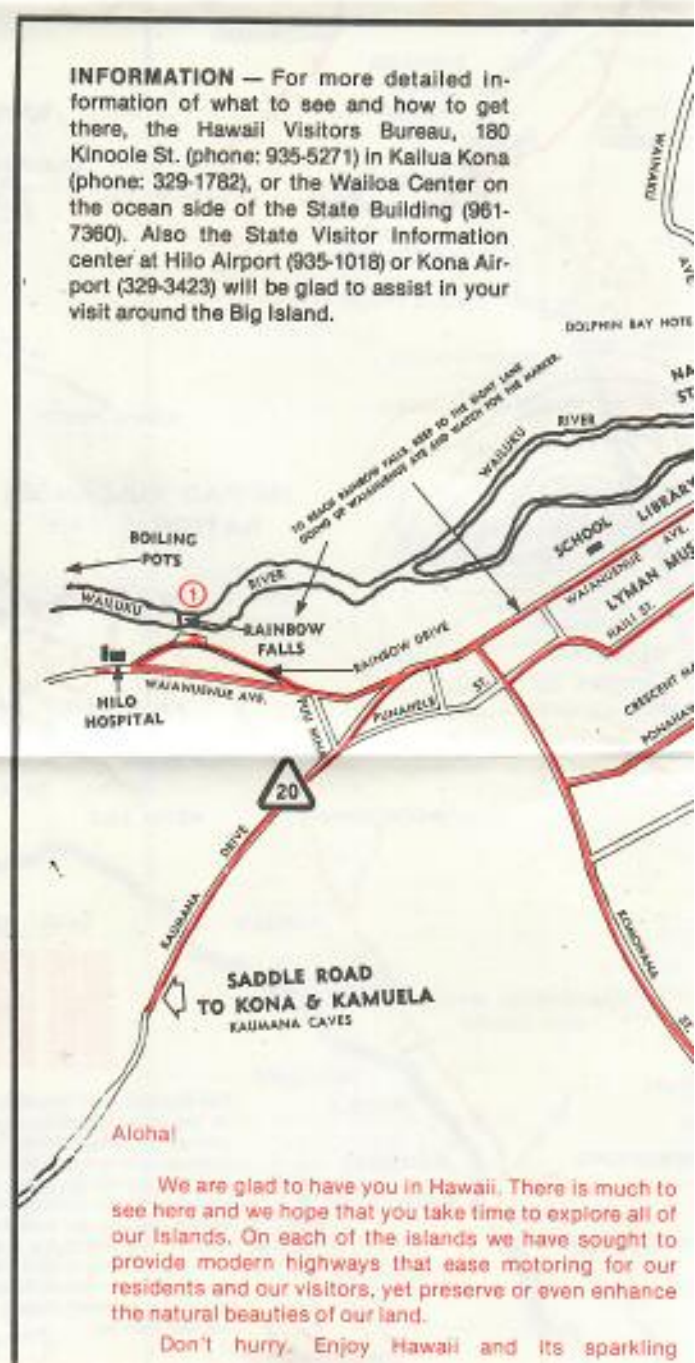
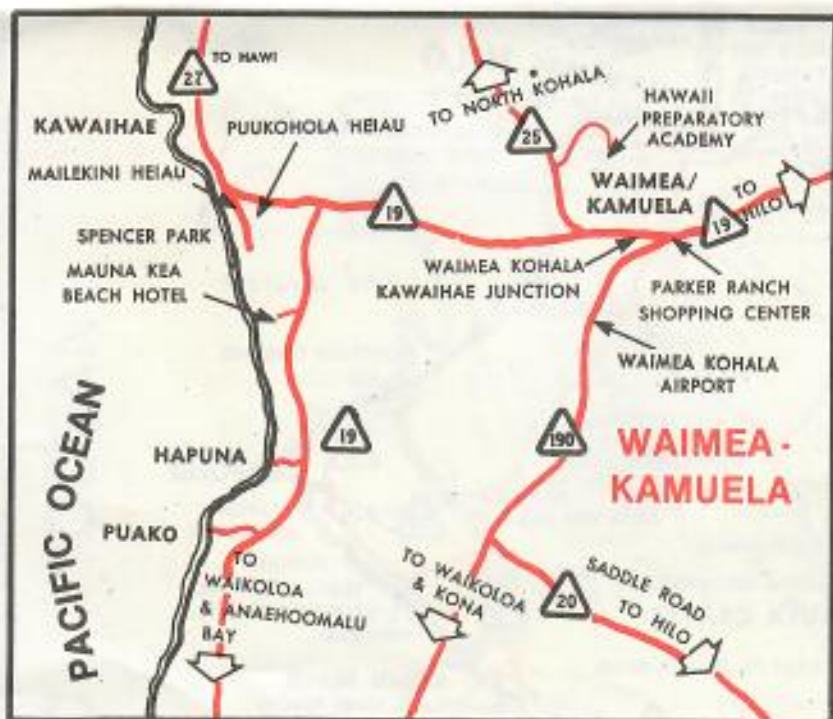
MARK TWAIN'S MONKEYPOD TREE—In Waiohinu, Mark Twain planted a monkeypod tree in 1866. A storm in 1957 toppled it, but the roots sprouted sapplings and the tree is still growing.

SOUTH POINT—It's the southern most point of the United States. Five miles south of South Point is the famous Green Sand Beach, made up of Green olivine crystals. It's accessible only by hiking or four wheel drive.

PUNALUU BEACH—A black sand beach, believed to be landing point of the first voyagers to Hawaii.

HAWAII VOLCANOES NATIONAL PARK - Park headquarters is just off Highway 19. Pamphlet guides to the park are available. Best known attraction are the Halemau Crater in the Kilauea Caldera, Devastation Trail, Thurston Lava tube bird park and the Park headquarters. If there is an eruption site, signs will be posted to best advantage. Call 967-7311 for details.

KAIMU BLACK SAND BEACH - Famous as the black sand beach of Kapaemahu. A natural beach of deep black sand, fringed with hundreds of beautiful coconut palms. Nearby are Kalapana Village and Queen's Bath, a natural pool.



INFORMATION — For more detailed information of what to see and how to get there, the Hawaii Visitors Bureau, 180 Kinoole St. (phone: 935-5271) in Kailua Kona (phone: 329-1782), or the Waioaloa Center on the ocean side of the State Building (961-7360). Also the State Visitor Information center at Hilo Airport (935-1018) or Kona Airport (329-3423) will be glad to assist in your visit around the Big Island.

Aloha!

We are glad to have you in Hawaii. There is much to see here and we hope that you take time to explore all of our islands. On each of the islands we have sought to provide modern highways that ease motoring for our residents and our visitors, yet preserve or even enhance the natural beauties of our land.

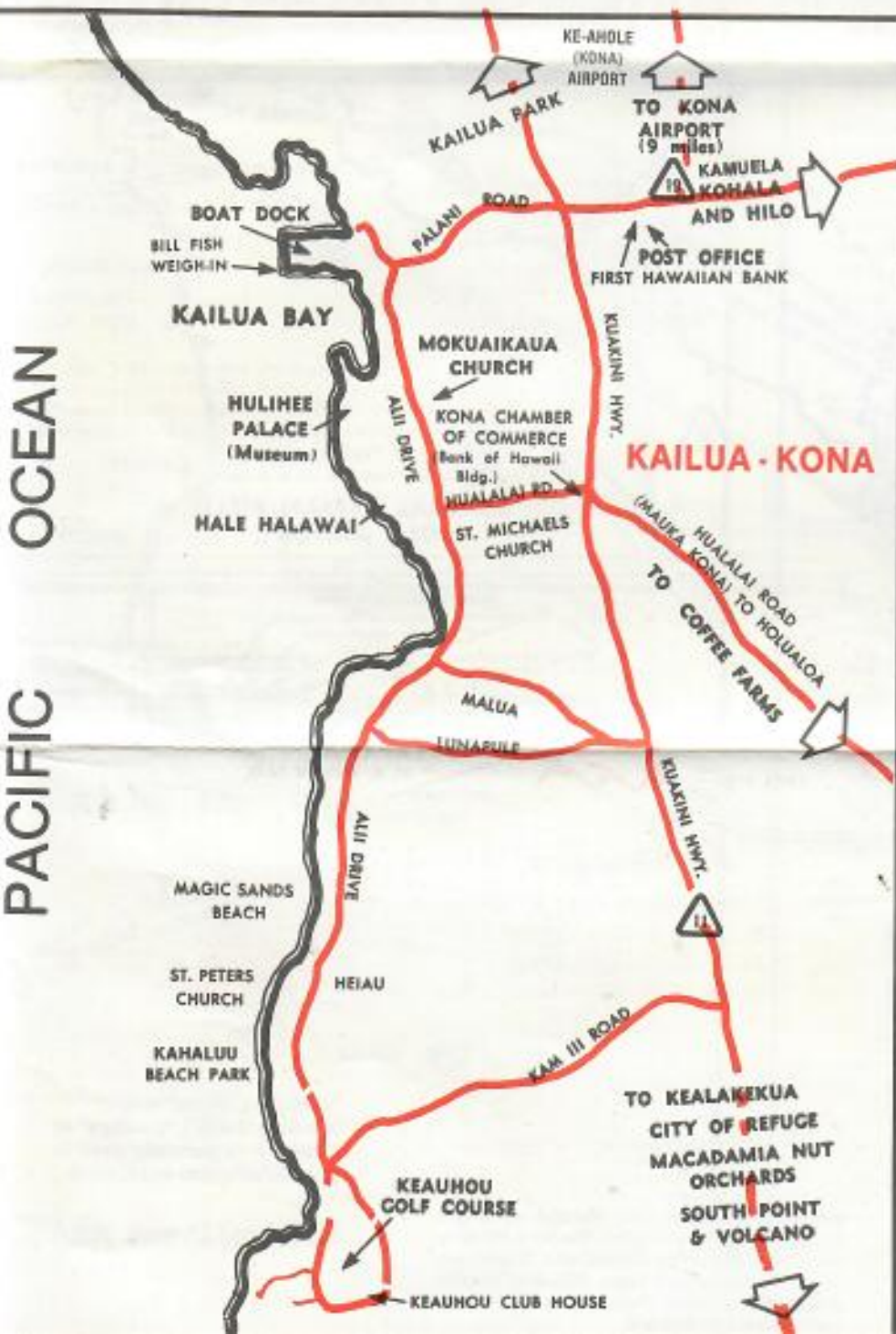
Don't hurry. Enjoy Hawaii and its sparkling

RECREATION ON THE BIG ISLAND

The Big Island of Hawaii has many recreational facilities. All kinds of sporting events take place on both sides of the island. Look in the local newspapers for times and dates of your favorite sporting events.

GOLF—The Big Island has some of the most beautiful golf courses in the world. At the top of the list is the Mauna Kea Beach Golf Course. Known around the world for its beauty and exciting layout. In Hilo there is the Banyan Golf center, right opposite the hotels on Banyan Drive. The Municipal golf center in Hilo offers an exciting course to play as does the Hilo Country Club. Up the Hamakua coast there is a golf course in Honokaa, then around to the Kona side of the island, where the Mauna Kea Beach is. Down south is the new Waikoloa Golf Course, designed by Robert Trent Jones. And farther down the coast is the exciting Keauhou Golf Course, built on solid lava rock. Coming up to Hilo from the south in Kau is the new Ninole Seamount Golf Course overlooking a black sand beach and finally the beautiful Volcano Golf Course up high near the Kilauea Volcano.

DEEP SEA FISHING—The Kona coast is one of the most famous fishing areas in the world. World record Marlin catches have become the rule rather than the exception. Smooth waters, year-round fishing and a variety of big game fish are available. For those who like to hunt, the Big Island abounds with wild sheep, pigs, goats and game birds. Hunting parties can be chartered to stalk the Mountain Big-horn up the slopes of Mauna Loa or hunt chukar partridge and California Quail on the large grassy plains of the Parker Ranch.



Camping, Hunting,
& Fishing permits,
write or call:

Hawaii State Parks:
State of Hawaii
Division of State Parks
75 Aupuni Street
Hilo, Hawaii 96720
Ph: (808) 961-7200

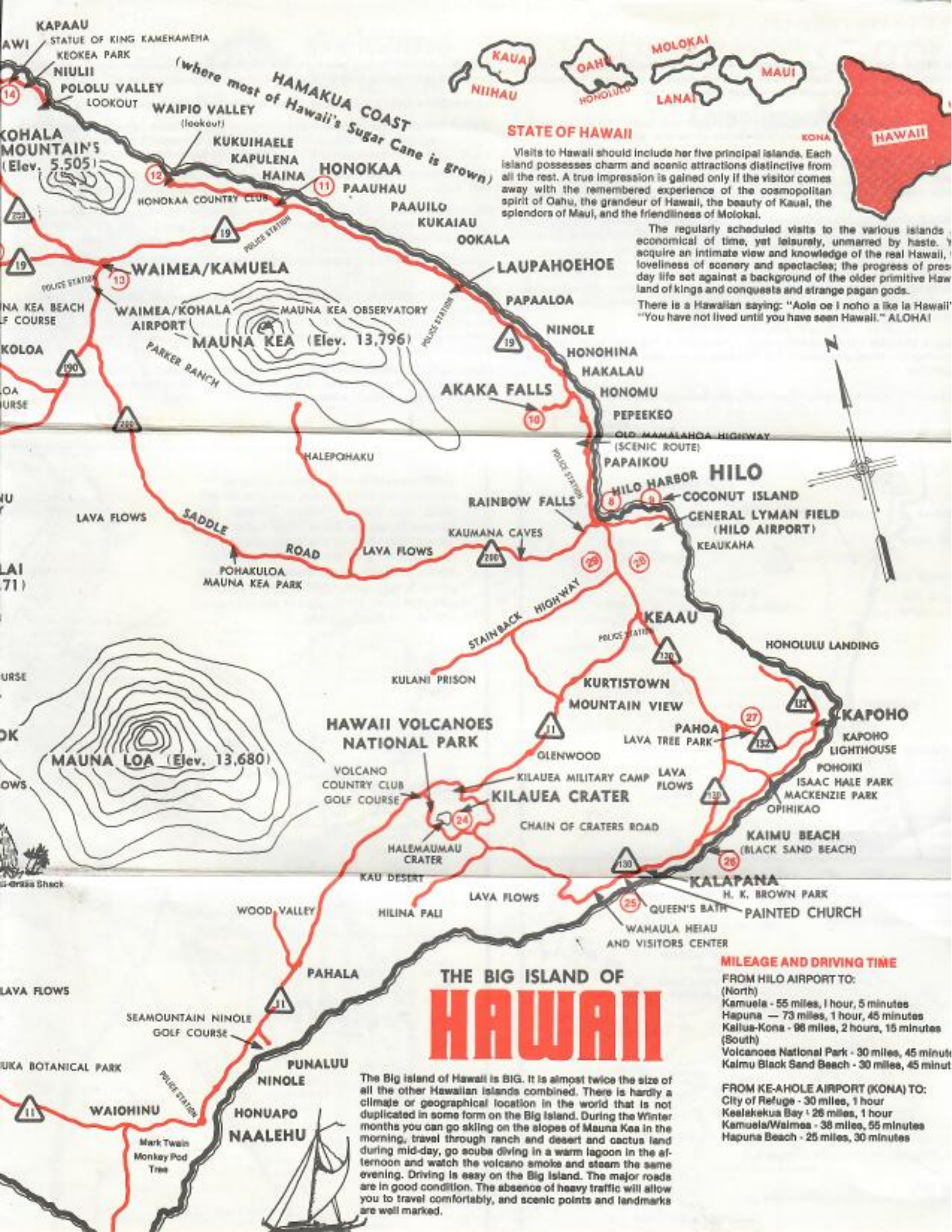
Hunting & Fishing:
State of Hawaii
Division of Fish & Game
75 Aupuni Street
Hilo, Hawaii 96720
Ph: (808) 961-7291

Hawaii County Parks:
County of Hawaii
Dept. of Parks & Recreation
25 Aupuni Street
Hilo, Hawaii 96720
Ph: (808) 961-8311



POINTS OF INTEREST

- 8 - HILO BAY
- 9 - COCONUT ISLAND
- 10 - AKAKA FALLS
- 11 - MACADAMIA NUT FACTORY
- 12 - WAIPIO VALLEY
- 13 - PARKER RANCH
- 14 - KING KAMEHAMEHA STATUE
- 15 - PUUKOHOLA HEIAU
- 16 - MAI MAILEKINI HEIAU
- 17 - HAPUNA BEACH
- 18 - MOKUAIKAUA CHURCH
- 19 - HULIHEE PALACE
- 20 - CAPT. COOK MONUMENT
- 21 - CITY OF REFUGE
- 22 - MILOLII FISHING VILLAGE
- 23 - SOUTH POINT
- 24 - KILAUEA VOLCANO
- 25 - QUEEN'S BATH
- 26 - KAIMU BLACK SAND BEACH
- 27 - LAVA TREE PARK
- 28 - MACADAMIA NUT FACTORY



STATE OF HAWAII

Visits to Hawaii should include her five principal islands. Each island possesses charm and scenic attractions distinctive from all the rest. A true impression is gained only if the visitor comes away with the remembered experience of the cosmopolitan spirit of Oahu, the grandeur of Hawaii, the beauty of Kauai, the splendors of Maui, and the friendliness of Molokai.

The regularly scheduled visits to the various islands economical of time, yet leisurely, unmarred by haste. You acquire an intimate view and knowledge of the real Hawaii, its loveliness of scenery and spectacles; the progress of present day life set against a background of the older primitive Hawaii of kings and conquests and strange pagan gods.

There is a Hawaiian saying: "Aole ou i noho a like ia Hawaii" "You have not lived until you have seen Hawaii." ALOHA!

THE BIG ISLAND OF HAWAII

The Big Island of Hawaii is BIG. It is almost twice the size of all the other Hawaiian islands combined. There is hardly a climate or geographical location in the world that is not duplicated in some form on the Big Island. During the Winter months you can go skiing on the slopes of Mauna Kea in the morning, travel through ranch and desert and cactus land during mid-day, go scuba diving in a warm lagoon in the afternoon and watch the volcano smoke and steam the same evening. Driving is easy on the Big Island. The major roads are in good condition. The absence of heavy traffic will allow you to travel comfortably, and scenic points and landmarks are well marked.

MILEAGE AND DRIVING TIME

FROM HILO AIRPORT TO:
 (North)
 Kamuela - 55 miles, 1 hour, 5 minutes
 Hapuna - 73 miles, 1 hour, 45 minutes
 Kailua-Kona - 98 miles, 2 hours, 15 minutes
 (South)
 Volcanoes National Park - 30 miles, 45 minutes
 Kaimu Black Sand Beach - 30 miles, 45 minutes

FROM KE-AHOLE AIRPORT (KONA) TO:
 City of Refuge - 30 miles, 1 hour
 Kealahou Bay - 26 miles, 1 hour
 Kamuela/Waimea - 38 miles, 55 minutes
 Hapuna Beach - 25 miles, 30 minutes

Hawaii

SeaMountain at Punaluu

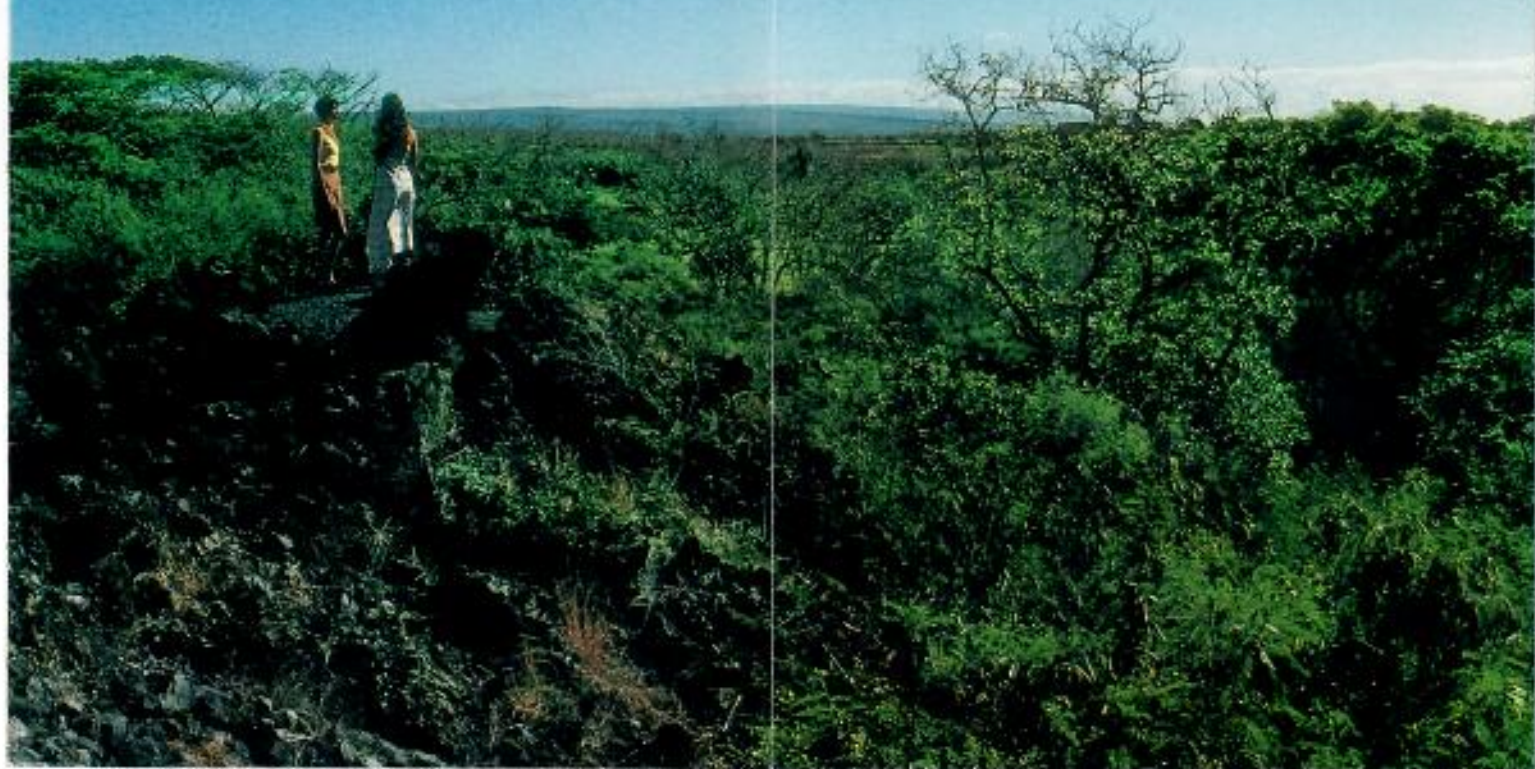
A thoughtful place
for seminars



Climate and setting can calm the mind and ready it for creative thought.

So it was that the Aspen Institute selected Punalu'u to locate a unique cluster of conference spaces where men and women from around the globe share ideas and dialogue.

Similar groups make use of available meeting facilities, enhancing the community's intellectual and cultural life.



How to experience Punalu'u life

Visitors:

The Colony: Completely furnished cottage apartments. One and two-bedroom units have full kitchens, including dishwashers, washers and dryers. Studio units have compact kitchen units. Laundromat facilities, convenience store, swimming pool, golf, tennis. Minimum stay: Two nights.

Meeting Planners:

Aspen Institute-Hawaii and other conference facilities available. Ideal for groups of 50 to 100. Food, beverage service available. A short stroll from The Colony.

How to get there—SeaMountain at Punalu'u lies halfway between Kona (65 miles) and Hilo (56 miles) airports on Highway 11; City of Refuge, Hawaii Volcanoes National Park, Mauna Loa Macadamia Nut Plantation can be toured en route.



Reservations & Information

U.S. & Western Canada—
call TOLL FREE

Parker Pacific Co. (800) 426-0494

Hawaii—Call Direct

Resort Sales Manager: (808) 935-0047

The Colony at Punalu'u: (808) 928-8301

OR SEE YOUR TRAVEL AGENT

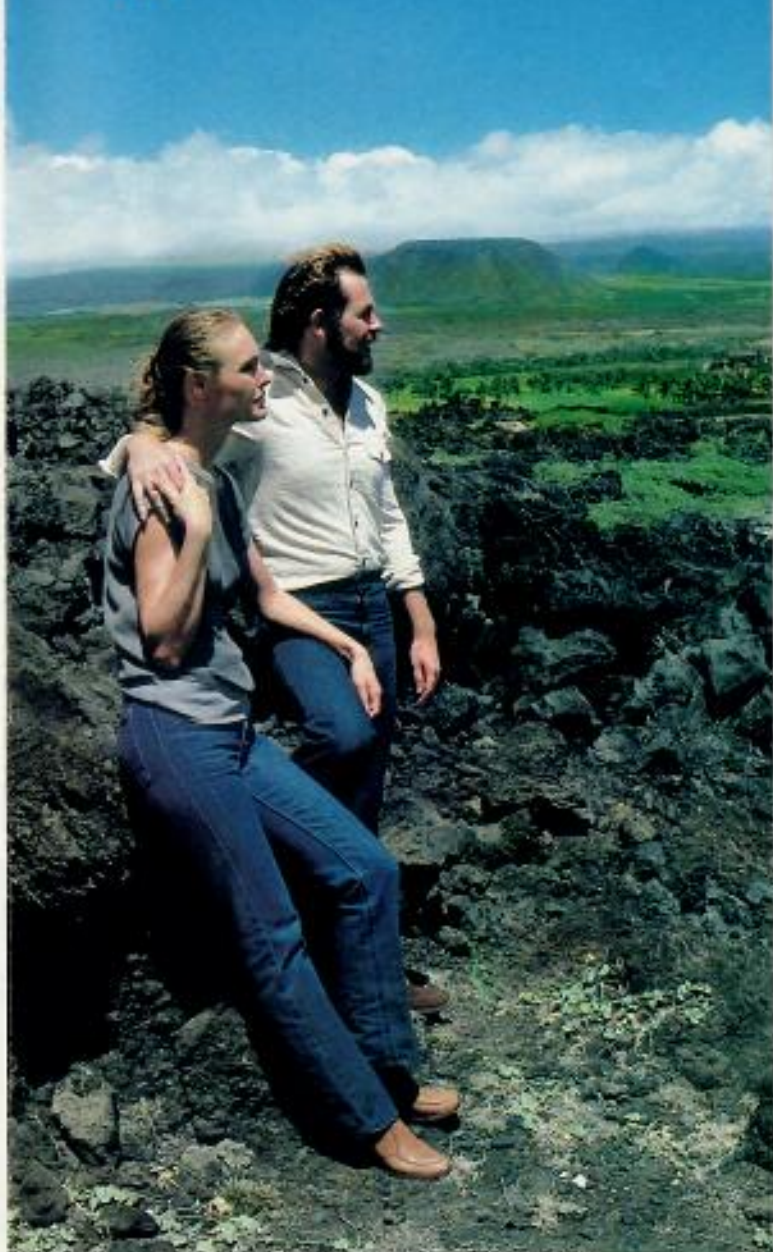
SeaMountain at Punalu'u



A community by Hawaiiiana
Investment Co., a C. BREWER company
On the Big Island of Hawaii

SeaMountain at Punalu'u

Big Island of Hawaii





SeaMountain at Punaluu

on the Big Island of Hawaii . . . halfway between Hilo and Kona . . . is set within a sunfilled, sweeping land. The land begins with black sand beaches, palm-fringed lagoons and ancient Hawaiian gathering places on the blue Pacific's edge. It climbs through sprawling ranchlands, brilliant green sugarcane fields, macadamia nut groves and tropical rain forests . . . up the 13,700 foot flanks of Mauna Loa (Long Mountain) . . . spacious, peaceful, seemingly without end.


Truly, Punalu'u . . . the jewel set in Hawaii's Big Country. Unique. A special place . . . for you.



The Colony, a cluster of comfortable accommodations for visitors and village residents alike. Studio, one- and two-bedroom cottage apartments are available, completely furnished down to kitchen utensils and linens. Golf, swimming, tennis and conference facilities are a short stroll. Shop at The Colony's convenience store or at villages close by.



Play Tennis on precise, new Laykold® courts in a garden-like setting with a teaching professional at your service. The courts are uncrowded and there is always time for an extra set or two.



SeaMountain Golf Course, par 72, is one of the most beautiful in Hawaii. Mountain and ocean views from each of its 18 holes. Club house, shop and professional services. Unhurried play, challenging, yet relaxing.



Conference Center of the Aspen Institute-Hawaii contains three meeting buildings, lanai and outdoor conversation area, plus additional facilities. Ideal for groups of 50-100 persons.



Black Sand Beaches, quiet lagoons and an unspoiled shoreline at Punalu'u are ideal for swimming, sunning, fishing, or simply beachcombing. Exploring heiaus—sacred places of ancient Hawaiians—and Hawaiian petroglyphs are just two ways you are brought in touch with the rich culture of Punalu'u.

Punalu'u Black Sands Restaurant, overlooking a palm-edged, tropical lagoon separated from the Pacific by famed Black Sand Beach. Open seven days a week, continental fare.



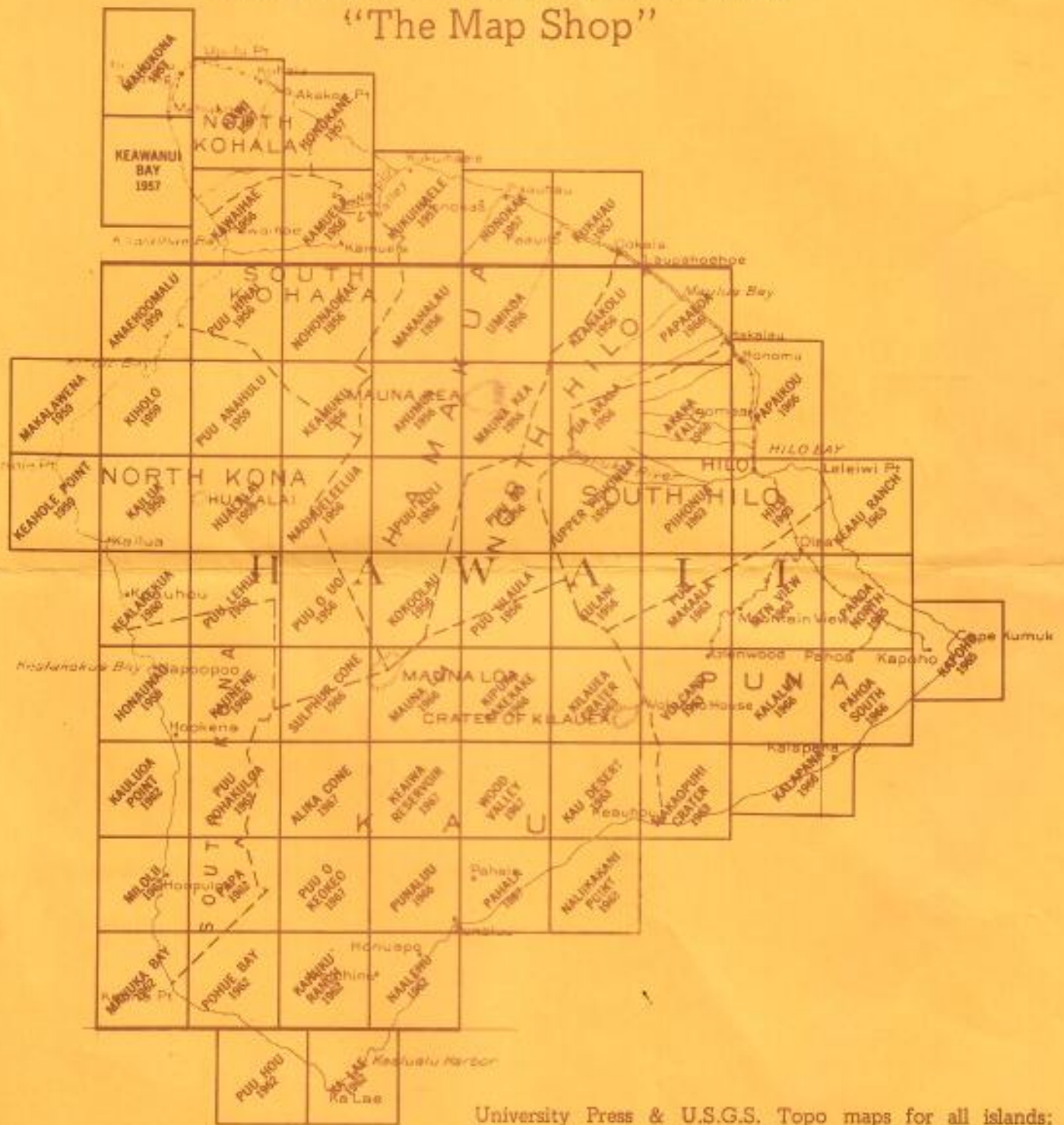
Hawaii Volcanoes National Park, 30 minutes from Punalu'u is a great natural phenomenon, where nature has chosen to renew itself... a unique learning experience.

SeaMountain at
Punalu'u



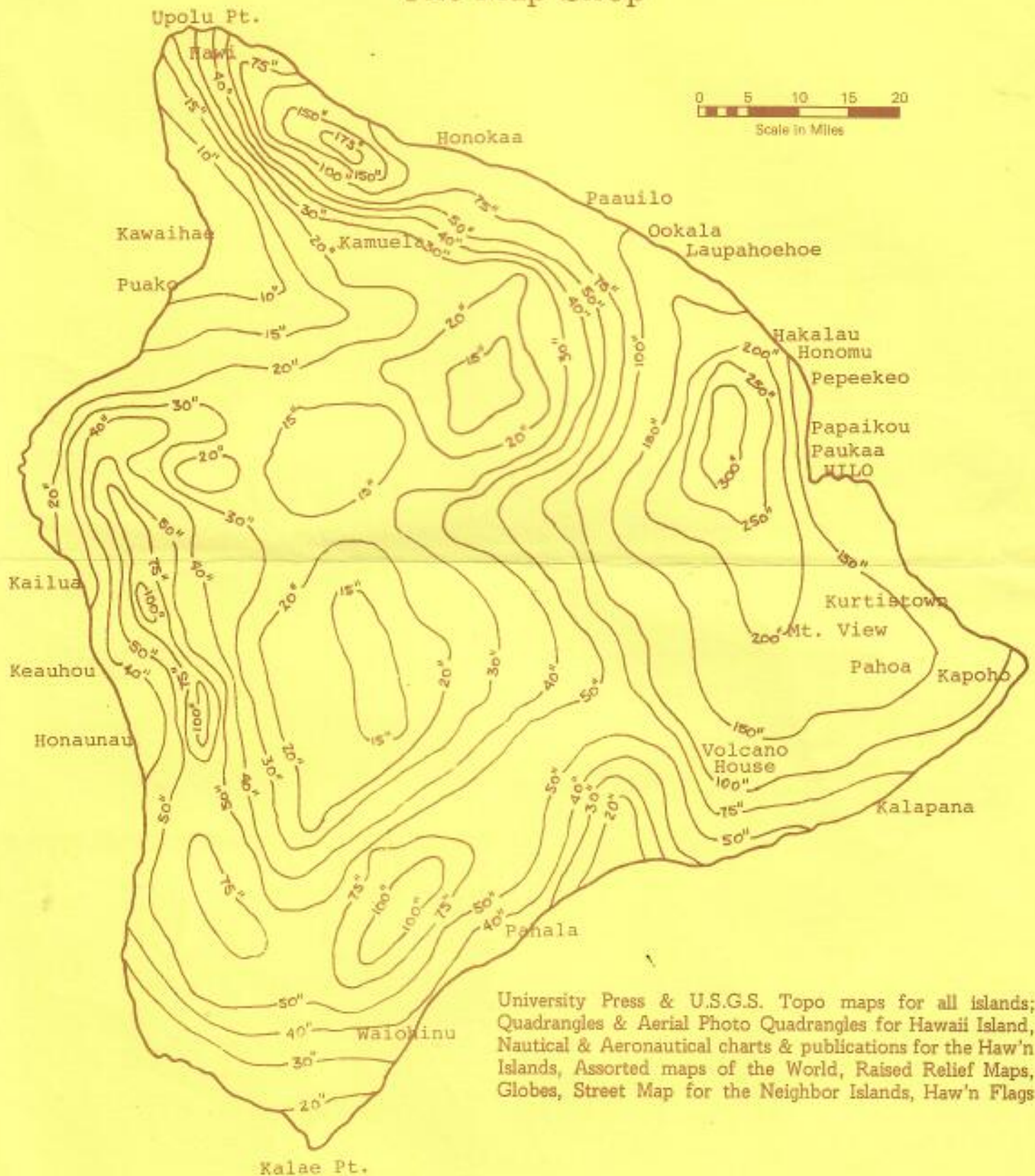
... a special
place for special
people ... on
the Big Island
of Hawaii

Compliments of
 Old Town Printers & Stationers
 "The Map Shop"



University Press & U.S.G.S. Topo maps for all islands;
 Quadrangles & Aerial Photo Quadrangles for Hawaii Island,
 Nautical & Aeronautical charts & publications for the Haw'n
 Islands, Assorted maps of the World, Raised Relief Maps,
 Globes, Street Map for the Neighbor Islands, Haw'n Flags

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University Press & U.S.G.S. Topo maps for all islands;
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 Islands, Assorted maps of the World, Raised Relief Maps,
 Globes, Street Map for the Neighbor Islands, Haw'n Flags

TOPOGRAPHIC MAP SYMBOLS

VARIATIONS WILL BE FOUND ON OLDER MAPS

Primary highway, hard surface	
Secondary highway, hard surface	
Light-duty road, hard or improved surface	
Unimproved road	
Road under construction, alinement known	
Proposed road	
Dual highway, dividing strip 25 feet or less	
Dual highway, dividing strip exceeding 25 feet	
Trail	

Railroad: single track and multiple track	
Railroads in juxtaposition	
Narrow gage: single track and multiple track	
Railroad in street and carline	
Bridge: road and railroad	
Drawbridge: road and railroad	
Footbridge	
Tunnel: road and railroad	
Overpass and underpass	
Small masonry or concrete dam	
Dam with lock	
Dam with road	
Canal with lock	

Buildings (dwelling, place of employment, etc.)	
School, church, and cemetery	
Buildings (barn, warehouse, etc.)	
Power transmission line with located metal tower	
Telephone line, pipeline, etc. (labeled as to type)	
Wells other than water (labeled as to type)	
Tanks: oil, water, etc. (labeled only if water)	
Located or landmark object; windmill	
Open pit, mine, or quarry; prospect	
Shaft and tunnel entrance	

Horizontal and vertical control station:	
Tablet, spirit level elevation	BM Δ 5653
Other recoverable mark, spirit level elevation	Δ 5455
Horizontal control station: tablet, vertical angle elevation	
Any recoverable mark, vertical angle or checked elevation	VABM Δ 3519
Vertical control station: tablet, spirit level elevation	BM X 957
Other recoverable mark, spirit level elevation	X 954
Spot elevation	X 7369 X 7369
Water elevation	670 670

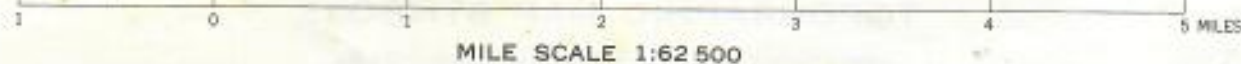
Boundaries: National	
State	
County, parish, municipio	
Civil township, precinct, town, barrio	
Incorporated city, village, town, hamlet	
Reservation, National or State	
Small park, cemetery, airport, etc.	
Land grant	

Township or range line, United States land survey	
Township or range line, approximate location	
Section line, United States land survey	
Section line, approximate location	
Township line, not United States land survey	
Section line, not United States land survey	
Found corner: section and closing	
Boundary monument: land grant and other	
Fence or field line	

Index contour		Intermediate contour	
Supplementary contour		Depression contours	
Fill		Cut	
Levee		Levee with road	
Mine dump		Wash	
Tailings		Tailings pond	
Shifting sand or dunes		Intricate surface	
Sand area		Gravel beach	

Perennial streams		Intermittent streams	
Elevated aqueduct		Aqueduct tunnel	
Water well and spring		Glacier	
Small rapids		Small falls	
Large rapids		Large falls	
Intermittent lake		Dry lake bed	
Foreshore flat		Rock or coral reef	
Sounding, depth curve		Piling or dolphin	
Exposed wreck		Sunken wreck	
Rock, bare or awash; dangerous to navigation			

Marsh (swamp)		Submerged marsh	
Wooded marsh		Mangrove	
Woods or brushwood		Orchard	
Vineyard		Scrub	
Land subject to controlled inundation		Urban area	



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

TOPOGRAPHIC
MAP INFORMATION AND SYMBOLS
MARCH 1978

QUADRANGLE MAPS AND SERIES

Quadrangle maps cover four-sided areas bounded by parallels of latitude and meridians of longitude. Quadrangle size is given in minutes or degrees.

Map series are groups of maps that conform to established specifications for size, scale, content, and other elements.

Map scale is the relationship between distance on a map and the corresponding distance on the ground.

Map scale is expressed as a numerical ratio and shown graphically by bar scales marked in feet, miles, and kilometers.

NATIONAL TOPOGRAPHIC MAPS

Series	Scale	1 inch represents	1 centimeter represents	Standard quadrangle size (latitude-longitude)	Quadrangle area (square miles)
7½-minute	1:24,000	2,000 feet	240 meters	7½×7½ min.	49 to 70
7½×15-minute	1:25,000	about 2,083 feet	250 meters	7½×15 min.	98 to 140
Puerto Rico 7½-minute	1:20,000	about 1,667 feet	200 meters	7½×7½ min.	71
15-minute	1:62,500	nearly 1 mile	625 meters	15×15 min.	197 to 282
Alaska 1:63,360	1:63,360	1 mile	nearly 634 meters	15×20 to 36 min.	207 to 281
Intermediate	1:100,000	nearly 1.6 miles	1 kilometer	30×60 min.	1568 to 2240
U. S. 1:250,000	1:250,000	nearly 4 miles	2.5 kilometers	1°×2° or 3°	4,580 to 8,669
U. S. 1:1,000,000	1:1,000,000	nearly 16 miles	10 kilometers	4°×6°	73,734 to 102,759
Antarctica 1:250,000	1:250,000	nearly 4 miles	2.5 kilometers	1°×3° to 15°	4,089 to 8,336
Antarctica 1:500,000	1:500,000	nearly 8 miles	5 kilometers	2°×7½°	28,174 to 30,462

CONTOUR LINES SHOW LAND SHAPES AND ELEVATION

The shape of the land, portrayed by contours, is the distinctive characteristic of topographic maps.

Contours are imaginary lines following the ground surface at a constant elevation above or below sea level.

Contour interval is the elevation difference represented by adjacent contour lines on maps.

Contour intervals depend on ground slope and map scale. Small contour intervals are used for flat areas; larger intervals are used for mountainous terrain.

Supplementary dotted contours, at less than the regular interval, are used in selected flat areas.

Index contours are heavier than others and most have elevation figures.

Relief shading, an overprint giving a three-dimensional impression, is used on selected maps.

Orthophotomaps, which depict terrain and other map features by color-enhanced photographic images, are available for selected areas.

COLORS DISTINGUISH KINDS OF MAP FEATURES

Black is used for manmade or cultural features, such as roads, buildings, names, and boundaries.

Blue is used for water or hydrographic features, such as lakes, rivers, canals, glaciers, and swamps.

Brown is used for relief or hypsographic features—land shapes portrayed by contour lines.

Green is used for woodland cover, with patterns to show scrub, vineyards, or orchards.

Red emphasizes important roads and is used to show public land subdivision lines, land grants, and fence and field lines.

Red tint indicates urban areas, in which only landmark buildings are shown.

Purple is used to show office revision from aerial photographs. The changes are not field checked.

INDEXES SHOW PUBLISHED TOPOGRAPHIC MAPS

Indexes for each State, Puerto Rico and the Virgin Islands of the United States, Guam, American Samoa, and Antarctica show available published maps. Index maps show quadrangle location, name, and survey date. Listed also are special maps and sheets, with prices, map dealers, Federal distribution centers, and map reference libraries, and instructions for ordering maps. Indexes and a booklet describing topographic maps are available free on request.

HOW MAPS CAN BE OBTAINED

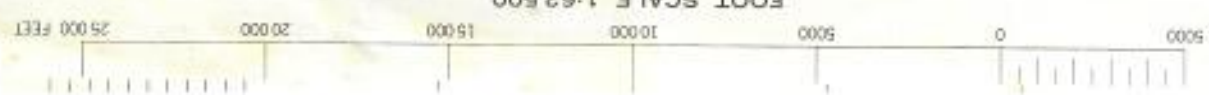
Mail orders for maps of areas east of the Mississippi River, including Minnesota, Puerto Rico, the Virgin Islands of the United States, and Antarctica should be addressed to the Branch of Distribution, U. S. Geological Survey, 1200 South Eads Street, Arlington, Virginia 22202. Maps of areas west of the Mississippi River, including Alaska, Hawaii, Louisiana, American Samoa, and Guam should be ordered from the Branch of Distribution, U. S. Geological Survey, Box 25286, Federal Center, Denver, Colorado 80225. A single order combining both eastern and western maps may be placed with either office. Residents of Alaska may order Alaska maps or an index for Alaska from the Distribution Section, U. S. Geological Survey, Federal Building-Box 12, 101 Twelfth Avenue, Fairbanks, Alaska 99701. Order by map name, State, and series. On an order amounting to \$300 or more at the list price, a 30-percent discount is allowed. No other discount is applicable. Prepayment is required and must accompany each order. Payment may be made by money order or check payable to the U. S. Geological Survey. Your ZIP code is required.

Sales counters are maintained in the following U. S. Geological Survey offices, where maps of the area may be purchased in person: 1200 South Eads Street, Arlington, Va.; Room 1028, General Services Administration Building, 19th & F Streets NW, Washington, D. C.; 1400 Independence Road, Rolla, Mo.; 345 Middlefield Road, Menlo Park, Calif.; Room 7638, Federal Building, 300 North Los Angeles Street, Los Angeles, Calif.; Room 504, Custom House, 555 Battery Street, San Francisco, Calif.; Building 41, Federal Center, Denver, Colo.; Room 1012, Federal Building, 1961 Stout Street, Denver Colo.; Room 1C45, Federal Building, 1100 Commerce Street, Dallas, Texas; Room 8105, Federal Building, 125 South State Street, Salt Lake City, Utah; Room 1C402, National Center, 12201 Sunrise Valley Drive, Reston, Va.; Room 678, U. S. Court House, West 920 Riverside Avenue, Spokane, Wash.; Room 108, Skyline Building, 508 Second Avenue, Anchorage, Alaska; and Federal Building, 101 Twelfth Avenue, Fairbanks, Alaska.

Commercial dealers sell U. S. Geological Survey maps at their own prices. Names and addresses of dealers are listed in each State index.

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1978

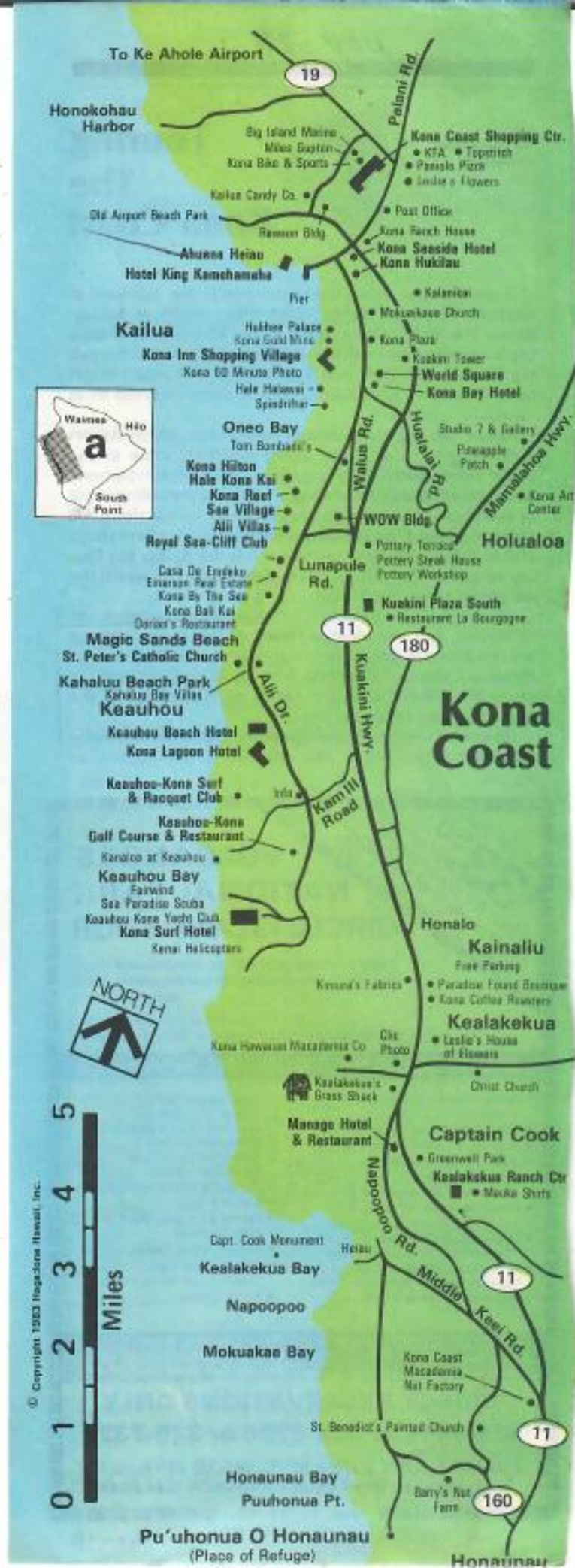
FOOT SCALE 1:62 500



MILE SCALE 1:24 000

FOOT SCALE 1:24 000





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See
Big Island Map
Centerfold



Touring The Kona Coast

A moonscape lava desert surrounds the runways at Keahole Airport, located eight miles north of Kailua-Kona. The Kona Coast refers to the 60 miles of Mauna Loa's and Hualalai's western slopes that are part of the two big districts of North and South Kona. The major resort town's name is Kailua-Kona, but is often referred to as "Kona."

Kailua, the Big Island's major resort town, offers visitors and residents year-round sunny weather, some of the world's best sport fishing, a quaint small town atmosphere, excellent restaurants and shopping, and a prevailing sense of romance. On your right, as you enter Kailua along **Alii Drive**, is **Hotel King Kamehameha** with its excellent shops and historical displays. Just past this is the **Kailua Bay Pier**. Try to get to the pier in the late afternoon to watch the weighing of the day's catch of big game fish.

On the pier's north side is tiny **Kamakahonu Beach** and its lagoon, and the **Ahuena Heiau**. Kamakahonu was the last residence of Kamehameha the Great, the unifier of the Hawaiian Islands, who died here in 1819. Daily walking tours are offered at this recently rebuilt replica of the heiau (ancient Hawaiian temple).

Down the street is **Mokuaikaua**, the oldest church in the islands, completed in 1837 by the first company of

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- Akaka Falls or Rainbow Falls (weather permitting)
- Hilo City Tour (lunch stop not inc. in price)
- Orchid & Anthurium Nurseries
- Volcanoes National Park Visitors Center (Eruption Film) Sulphur Banks & Vents Observatory
- Kilauea Volcano Crater Rim Drive
- Halemaumau Fire Pit
- Devastation Trail
- Thurston Lava Tube
- Fern Tree Jungle
- Punalu'u Black Sand Beach
- South Point
- World's Largest Mac Nut Orchard
- Kona Coffee Fields
- Kealahou Bay
- Capt. Cook Monument
- Kona Coast

HOTEL OR CONDO PICK-UP
Kailua-Kona 7 am
Sheraton Royal Waikoloa 8-8:30 am

Return approx. 6 pm
Mauna Lani Bay 8-8:30 am
Mauna Kea Beach 8-8:30 am

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---exp. 12/31/83---

4/11/84

Hello George,

I do hope this info. on the dives that we made here last month will suffice. Heard you'll be coming up to the campus on Thurs. 12th for a presentation of your work on turtles + slides - will look forward to seeing you next week.

Aloha,

Shirley Karli



University of Hawaii at Manoa

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Marine Advisory Program
2349 Kalaniana'ole Avenue
Hilo, Hawaii 96720
(808) 935-3830

February 7, 1980

Mr. George Balazs
Hawaii Institute of Marine Biology
P.O. Box 1346
Coconut Island
Kaneohe, Hawaii 96744

Dear George:

It was good hearing from you again. And thanks for the articles on turtles and the buttons.

I guess the turtle that was spotted at the Hilo Hawaiian Hotel close to shore the other week made its way into deeper water. I hope it does recover from whatever ailment it had that caused it to seek shallow water. Del Dykes, a local dive instructor, said it could have suffered from a "burrowing barnacle" or mite. Whatever it was, it sure made an ugly lump on the head and flipper of the poor animal.

We'll keep you informed on any turtle news here on the Big Island.

Sincerely,

Howard A. Takata
East Hawaii Agent



University of Hawaii at Manoa

A Sea Grant College

Spalding Hall 252 B • 2540 Maile Way

Telephone (808) 948-8191 • Honolulu, Hawaii 96822 / Cable Address: UNIHAW

Marine Advisory Program
2349 Kalanianaʻole Avenue
Hilo, Hawaii 96720
(808) 935-3830

November 24, 1981

Mr. George H. Balazs
National Marine Fisheries
Service
PO Box 3830
Honolulu, HI 96812

Dear George,

Thanks very much for the post cards! We plan to laminate and display them at our Center. Now all we need are a set of turtle stamps to complete our display.

I have not received any reports of the turtles you released here. I will most certainly give you a call if any are reported. Generally, the surfers are too busy catching waves and are not concerned about any turtles bobbing around in the vicinity. We'll ask them to be on the lookout for any tagged turtles and will ask Joe Whitney to inform them also.

Del Dykes has been busy with exams and qualifying for a fireman's position. He has received your letter and will respond as soon as he finds some time. His latest activities involved observing autopsies and assisting in the emergency room. Yuk!

When are you planning a trip to the Big Island again? We should work on that high school presentation that we discussed toward the end of the last school year.

Mahalo again for the postcards!

Sincerely,

Howard Takata
East Hawaii Agent

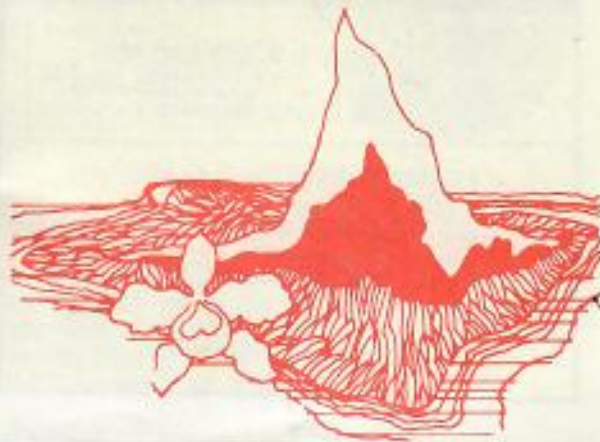
HAWAII ISLE GUIDE

A COMPREHENSIVE GUIDE TO THE SIGHTS AND
ACTIVITIES ON THE BIG ISLAND OF HAWAII

MAY 1977



HAWAII ON HORSEBACK
AT ANNA'S RANCH



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HAWAII ON HORSEBACK

A colorful, unique, fascinating and elaborate pageant based on U.S. and Hawaii's history is produced every 2 years by society matron and rancher, Mrs. Anna Lindsay Perry-Fiske at her own ranch in Waimea. All proceeds go to the Hawaii Heart Association. Scheduled for May 21, 1977 at noon, this magnificent, nostalgic display of costumes and horsemanship is an event that should not be missed.

MAY CALENDAR

- 1-7 National Extension Homemakers Week.
 1-11 Student ART SHOW at the Campus Center at the University of Hawaii.
 1-13 WAILOA CENTER Big Islands Children's Art Show.
 1 St. Joseph Carnival at the Hilo Civic Auditorium grounds.
 1 Humane Society PET SHOW at Hale Halawai.
 1 Lei Day Contest HULIHEE PLACE.
 1 Lei Day or May Day.
 1 BIIF Baseball 1:30 p.m. HPA at Ka'u, St. Joseph at Hilo High, Pahoa at Laupahoehoe and Honokaa at Kona.
 1-15 LITTLE GALLERY Holuaos Impressions of Japan by Jeff Gholson.
 2 Chanting Program at Kulana Naauso 7-9 p.m.
 2 DANCE HAWAII Community Dance classes at Mountain View School Gym 6:30-8:30.
 2 May Day Program and Lei Contest at Konawaena High School.
 2 University of Hawaii Pesticide Training Class 6:30-8:30 room 124 Konawaena High School.
 2 P & R Girls Elementary Basketball at the Hilo Armory.
 3 Concert at the HILO CIVIC AUDITORIUM George Magnan III 7:00 p.m.
 3 DANCE HAWAII Community Dance Classes at Shipman Gym in Keaau 3:30-5:30.
 3 HONOKAA LIBRARY Children's Film Program 2:45 p.m. "The Princess and the Pearls" and "Moonbeam Princess".
 4 HUI HANA LIKI at the Kulana Naauso 7-9 p.m.
 4 University of Hawaii Pesticide Training Class 6:30-9:30 Konawaena High School room 124.
 4 P & R Girls Elementary Basketball at the HILO ARMORY.
 4 THELMA PARKER LIBRARY Kamuela same childrens film schedule as Honokaa Library May 3.
 4 KEALAKEKUA LIBRARY 7:00 "Toulouse-Lautrec", "The Hunt" and "Where the Wild Things Are".
 5 BOY'S DAY "Tango-No-Sekku", Japanese traditional celebration.
 5 LAUPAHOEHOE LIBRARY 7:00 p.m. Films "Bayanihan".
 5 KONA BOOKMOBILE at HONAUNAU Community Center same film schedule as Kealakekua Library May 4.
 5 KEAAU LIBRARY films at 7:00 p.m. "Karate: Art or Sport?", "The Icy People" and "Fish Naturally".
 5 BOND MEMORIAL LIBRARY Kapaau Childrens film program same as Honokaa Library May 3, 3:30 p.m.
 6 MAY DAY Program at Kau High School 12:30 p.m.

Lyman House Memorial Museum

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MAY CALENDAR (continued)

- 6 KONAWEANA High School Band Concert at the New Gym 7-9 p.m.
 6 Big Island Outstanding Senior Citizen Ceremony, 9 a.m. at Wailoa State Park. Selection of Outstanding Male and Female over age 65 to be announced.
 6 MAY DAY Program at Honokaa High School 10:00 a.m.
 6-7 Boy Scouts CAMPOREE Kona and Hilo.
 6-8 Waiakea Boosters Club Carnival at the Hilo Civic Auditorium Butler Building.
 7 VOLCANO ARTS CENTER 9-4 p.m. Stained Glass Workshop with Wanda Patterson. At Old Japanese School Studio. Fee \$10. Material provided.
 7 North Hilo 4-H Council MARKET DAY at Mooheau Park.
 7 Hilo College Cafeteria Tourist Council Forum "Hilo Kona the growing Visitors Island Destination" 8-2 p.m.
 7 Senior Class play Konawaena School "Stack Pot" 7:30 p.m.
 7 Konawaena Choir Concert at Hale Halawai.
 7-8 HPA Faculty and Students Play at Kahilu Theater 8:00 p.m. "Stage Door" director Jack Talbot.
 7-21 GARRDA Art Show at the Kulana Naauso.
 8 County Band Concert at COCONUT ISLAND with selected members from Hilo High School Band, also members Senior Citizens Clubs entertaining.
 9 DANCE HAWAII Community Dance Class at the Mountain View School Gym 6:30 to 8:30 p.m.
 9 Hawaii County Band will play at 7 p.m. at Volleyball Tournament.
 9 P & R Girls Elementary Basketball at Hilo Armory.
 10-14 NATIONAL VOLLEYBALL TOURNAMENT at Hilo Civic Auditorium and Hilo Armory.

continued on page 10

BACK TO NATURE



ONOMEA "ARCH" OR "SLOT"

Once this slit in the ridge that juts out into the ocean a few miles north of Hilo had a top that made the hole look like an arch. It was called then "Onomea Arch" or more popularly referred to as "Puka in the Pali". On May 24, 1956 the top fell in and the arch became only a slot, but the spot is still a lovely scenic attraction and well worth the drive down the old Mamalahoa Highway to see. To get there turn right going north just past the bridge at Papaikau, about 5 miles out of Hilo. Wind down the old coastal road, lined with Alexandra Palms. The "slot" is clearly visible as you round the corner down into Onomes gulch.

GO Woolworth

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- 4 HAILI CHURCH
- 5 HAWAII COMMUNITY COLLEGE
- 6 HILO COLLEGE
- 7 HILO MUNICIPAL GOLF COURSE
- 8 KAUMANA CAVE
- 9 LIBRARY
- 10 LILIOKALANI PARK
- 11 RAINBOW FALLS
- 12 TO VOLCANO
- 13 WAILOA CENTER



POINTS OF INTEREST - CITY OF HILO 7

- Bus Terminal:** Kamehameha Ave. and Mamo St. Next to Mooheau Park. Restrooms. County Buses. Ph. 935-8241.
- Coconut Island:** Hilo Bay across Waiakea Peninsula. Restroom facilities, access by bridge.
- County Building:** Aupuni St. in Kaiko'o complex. County of Hawaii administrative offices and the Mayor.
- Deep Sea Fishing:** Hilo Harbor. Few waters in the world rival Hawaii's bountiful blue seas when it comes to deep sea fishing.
- Haili Church:** Haili and Ululani Sts. Home to the Hawaii's most famous choir groups. Built in 1859 by Protestant Missionaries, the Church offers services in Hawaiian and English.
- Hale Mann Crafts:** Off rt. 11. Watch weaving of hats, purses, mats and baskets from lauhala, the sturdy leaf of the pandanus tree. Open daily. Follow Kilauea Ave. to end of town.
- Hawaii County Library:** 300 Waiuanue Ave. Mon. - Thurs. 9 a.m. to 8 p.m. Fri. & Sat. 9 a.m. to 5 p.m. Site of the famous Naha and Pinao Stones.
- Hawaiian Homes Commission:** 160 Baker Ave. Administrative offices and Kalanana'okoa Hall and Gym.
- Hilo Civic Auditorium:** 323 Manono St. Phone: 935-8213.
- Hilo High School:** 556 Waiuanue Ave. Phone 935-4881.
- Hilo Hongwanji Temple:** 398 Kilauea Ave. Built in 1925. Oldest Japanese Buddhist mission in the state, founded in 1889. Be sure to see the Beautiful Golden Alter.
- Hilo Pot Factory:** 265 A Kekuanaoa St. Open Mon., Wed. & Fri. 6 p.m. to midnight. Phone: 935-1502.
- Hirose Nurseries:** 2212 Kanoiehua Ave. (1 mile outside of Hilo) Rare orchids and other tropical flowers. Ph: 959-8567.
- Honoliuli Beach Park:** Off Rt. 19 on the old Mamalahoa Hwy. Find out what makes it a favorite surfing site among local kids.
- Hoolulu Park:** Behind Civic Auditorium. Baseball, football, tennis courts, swimming pool. Phone: 935-8907.
- Kaiko'o Redevelopment Project:** A federal-state-county project to redevelop land destroyed by the 1960 tidal wave. Land has been raised to 20 feet. Governmental center with state and county buildings and shopping complex.
- Kaiwika Park:** 6 1/2 miles up on Kaiwika Rd. Pavilion, restrooms, hiking, picnicking, large athletic field.
- Kalaka'au Park:** Kinoole St. and Waiuanue Ave. Former site of King Kalakaua's home. World War II Memorial.
- Kaumana Caves:** 5 miles up on Kaumana Drive. Natural lava tube. Hiking, picnic tables.
- Kong's Floraleigh Gardens:** Just past Onekahakaha Beach Park. Hawaiian Tree Fern Products and Kamaaina Crafts. A unique collection of tropical plants in a tropical setting.
- James Keolu Park:** 4 miles out on Kalaniana'okoa Ave. Swimming, picnic facilities, restrooms and pavilions.
- Kulama Naunao:** 14 Keawe St. Cultural Center. Classes held, see calendar for schedule. Phone: 935-9183
- Lelelwi Park:** 5 miles out on Kalaniana'okoa Ave. Swimming, picnic facilities, restrooms, pavilions.
- Lilikalanani Park:** Lihikai St. and Banyan Drive. A Japanese Yedo type garden. Restroom facilities on Kainehi St. side. Picnic area toward Coconut Island side. Also featured a Japanese tea house.
- Lyman House Memorial Museum:** 276 Haili St. Old missionary home and new museum. Early day Hawaiiana of this region. Mon. thru Sat. 10 a.m. to 4 p.m. and Sun. 1 to 4 p.m.
- Mau's Canoe:** Wailuku River at Wainaku St. bridge. According to legend, Mau's canoe turned to stone. Look for a huge rock on the town side in the Wailuku River.
- Mauna Loa Orchids:** 784 Kinoole St. Orchid display and walking tour of the Orchid fields. Open daily. Ph: 935-4106.
- Mooheau Park:** Kamehameha Ave. and Mamo St. Bandstand, athletic field, restroom and bus station. Ph: 935-8241.

POINTS OF INTEREST - CITY OF HILO

Naha and Pinao Stones: On the ground of the Hawaii Public Library 300 Waiianuenu. The Pinao Stone was the temple's entrance pillar. The Naha Stone was used to test the legitimacy of the heirs to the royal Naha line. It was said that the one who overturned the stone would rule the islands. Legend says that King Kamehameha I lifted this stone to prove his claim to the throne.

Nani Mau Gardens: 421 Makalika St. Hilo, (Off Hwy. 11) More than 225 different exotic plants on 14 acres. Open daily.

Onakahakaha Beach Park: About 3 miles out on Kalaniana'ole Ave. Pavilions, picnic areas, camping, swimming, wading, and restroom. Also children's zoo.

Orchidarium: 524 Manono St. Most outstanding and famous orchid garden and display. Orchid judging every 2nd Friday at 7:30 p.m. Open daily from 9 a.m. to 5 p.m. Phone: 935-8318.

Orchids of Hawaii: 575 Hinano St. Open daily. Ph: 935-6617.

Pihonus Boiling Pots and Peepee Falls: Home of Mother Nature's own special jacuzzi bath. A series of deep, round pools cut in the lava stream bed and linked by falls and rapids. Turbulent water flows beneath the lava and bubbles up as if it were boiling. Located about the corner of Wailuku and Peepee Falls St.

Rainbow Falls: Off Waiianuenu Ave. below the Hilo Hospital. Picnic areas and walking trails, restrooms. Legendary home of the goddess of Hina, Mother of Maui.

Reeds Bay Park: Banyan Drive just off Kalaniana'ole Ave. Next to Royal Kalani Hotel. Swimming, boating and restrooms.

Seismograph Station: Kapiolani and Hualalai Sts. across from St Joseph's School. Records earthquakes.

State of Hawaii Office Building: Aupuni St. at Kaiko'o Houses administrative offices for the State Government.

Suisan Fish Market: Fish auction daily at 7:30 a.m. Lihikai St. on Hilo Bay. Phone 935-8051 for information.

Tree Nursery: 1643 Kiluaea Ave. corner of Kawili St. 600 trees from all over the world. Open 7:45 a.m. to 4:30 p.m. Mon. thru Fri. Phone 935-6292.

University of Hawaii College of Agriculture: 333 W. Lanikaula. Phone: 961-9311.

University of Hawaii Community College: 1175 Manono St.

University of Hawaii Hilo College: 333 W. Lanikaula St. Four year Liberal Arts College Site of Cloud Physics Lab and Agricultural Research Center. Phone 961-9311.

Waioa Information Center: In Kaiko'o open area below County Building, off Pauahi St. Phone 961-7360.

Waioa State Park: North end of Pihani St. Waioa River flows from Waiakea Pond, which is fed by fresh water springs. Picnicking, pavilions, restrooms, fishing permitted with license from Fish and Game Dept. Call 961-7291.

World War II Memorial: Located in Kalakaua Park.

Waiakea Peninsula: Along Banyan Drive, Hilo's resort area. Drive named after the huge Banyan trees planted by world famous personalities.

Waiakea Village Resort & Gardens: 400 Hualani St. A unique hotel-village complex. Phone 961-3041.

Zoo: Onakahakaha Beach Park. Children's zoo.

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POM KIM-CHEE (Spring Pickled Cabbage)

3 cups celery cabbage	1/2 teaspoon chopped red chile pepper
3 green onions	1 teaspoon chopped candied ginger
3 tablespoons salt	1-1/2 cups water
1 clove garlic	

Wash cabbage and cut into 1-inch squares. Sprinkle with 2 tablespoons salt, mix well and let stand 15 minutes. Wash cabbage in cold water two or three times. Cut the onions into 1-1/2 inch lengths, add remaining ingredients. Chop the chile pepper and garlic fine. Mix cabbage and prepared vegetables; put in glass or stone crock. Add enough water to cover the cabbage and let stand for several days. Keep cabbage under liquid with weighted dish or cover, or plastic bag filled with water. In warm weather one day is sufficient. Kim chee may be kept several weeks in the refrigerator.

PUL KO-KEE (Broiled Barbecued Beef)

1 pound beef	1 green onion, chopped
4 tablespoons sugar	1 clove garlic, chopped
2 tablespoons oil	4 tablespoons prepared sesame seed
6 tablespoons soy sauce	1 tablespoon flour
Few grains pepper	

Cut the beef into thin sliced 3-inches square. Add sugar and oil, mix well. Combine soy sauce, pepper, chopped onion including top, chopped garlic, prepared sesame seed and flour. Add to the meat, mix well. Let stand 15 minutes.

Broil over a charcoal fire, or fry in a small amount of oil until tender. If frying meat, cover tightly after it is well browned. Add a small amount of water and steam until meat is tender. Serve hot.

Makes 6 servings.

PREPARED SESAME SEED

1 cup hulled sesame seed
1 teaspoon salt

Put seed in a heavy skillet and brown slowly, stirring constantly. When the seeds are brown and rounded, remove at once from the fire and skillet. Add salt. Mash the seeds until pulverized in a small bowl or crush with pin between two sheets waxed paper. Sesame seed is used in this form in most recipes.



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POINTS OF INTEREST - SOUTH HILO

Akaka Falls State Park: Spectacular falls, 420 ft. 15 mi. north of Hilo up route 19 to Honouliuli, then up route 22. Tropical foliage, picnic area, restrooms and hiking. No camping.

Kolekole Beach Park: 12 miles north of Hilo on route 19. Camping, picnicking, hiking, swimming and fishing. Pavilions and restrooms.

Kulanani Honor Camp: State prison camp. A good place to buy carved native wood articles. Open daily from 9 a.m. to 3 p.m. 17 miles up Stainback Highway. Off route 11 just outside Hilo. Phone 935-3758 for information.

Mauna Kea Sugar Company: At Onomea. Phone 964-1025.

Onomea Fallen Arch: Turn off route 19 at Papaikou to right and follow old "Scenic" Highway. Formerly called "The Puka in the Pail", the top of the arch caved in a few years ago.

Panewa Race Track: 6 miles up Stainback Hwy. Off Rt. 11 just outside of Hilo. Features a 5/8 mi. track, full fledged rodeo arena, and 32 horse stalls. See calendar for schedules.

Scenic Router: Old Mamalahoa Highway 4 miles coast drive off Highway 19 at Papaikou.

MAY CALENDAR (continued)

- 10 KAILUA-KONA LIBRARY same film schedule as Kealakakua Library May 4 7:00 p.m.
- 10 DANCE HAWAII Community Dance Class at Keauu's Shipman Gym 3:30-5:30.
- 11 PAHOA LIBRARY 7:00 p.m. same film program as Laupahoehoe on May 5.
- 11 HONOKAA LIBRARY 7:00 p.m. Films "And now Miguel".
- 11 PAHALA LIBRARY 7:00 p.m. same film schedule as Keauu Library May 5.
- 12 Cubscout Leaders ROUNDTABLE.
- 13 DANCE HAWAII Presentation at 7:30 p.m. Mountain View School Gym.
- 13 Spanish Club Supper at Kau High School Cafeteria 7:00 p.m.
- 13 Annual Music and Arts Festival Kau High School.
- 13-14 The Great WAIKALOA Rope-A-Thon.
- 13-25 Hawaii County Womens Conference 8-4 p.m. in conjunction with the Hawaii County Commission on the State Conference of International Womens year.
- 14 KAWAIIHAE REGATTA Kawaihae Canoe Club Races.
- 15 County Band will play at Hawaii Corale at the Holy Cross Church 7:30.

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HAWAII ISLE GUIDE 38 Kalakaua St., Hilo, Hawaii 96720

MAY CALENDAR (continued)

- 15-20 SENIOR WEEK at Hilo High School - 16- Kick Off Rally 17- Feets of Fun 18- Senior Luau 19- Class picnic at Wailoa State Park 20- Spirit Rally and Senior Awards Banquet.
- 16 P & R Girls Elementary Basketball at Hilo Armory.
- 16-20 WAILOA CENTER Love of the Land is shown in Their People Art exhibits.
- 17 THELMA PARKER LIBRARY Kamuela 7:00 p.m. Same film program as Honokaa Library May 11.
- 17 DANCE HAWAII Community Dance Classes at the Keauu Shipman Gym 3:30-5:30.
- 18 P & R Girls Elementary Basketball at the HILO ARMORY.
- 18 The MONTERY will be in Hilo Harbor 7:00-10:00 p.m.
- 18 INTERNATIONAL Night at the Hilo Hawaiian Hotel featuring the Mexicans.
- 18 BOND MEMORIAL LIBRARY 7:00 same film schedule as Honokaa Library May 11.
- 18-19 GEOTHERMAL SEMINAR at the University of Hawaii.
- 19 HAWAII COMMUNITY COLLEGE Graduation at the Civic Auditorium 7:30 p.m. Keynote speaker Larry Ronson of First Hawaiian Bank Honolulu.
- 19 Federal Communications Commission Examination for commercial and amateur licenses State Office Building 9 a.m.
- 19 Scout Leaders ROUNDTABLE.
- 20 P & R Girls Elementary Basketball at the Hilo Armory.
- 20 HILO COLLEGE Graduation at the Hilo Civic Auditorium.
- 20 NA OPIO O' KUHIO Concert at the Hilo Civic Auditorium.
- 20 Boy Scout Public Speaking Contest.
- 21 Boy Scout Swim Meet at the NAS Pool.

continued on page 21



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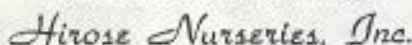
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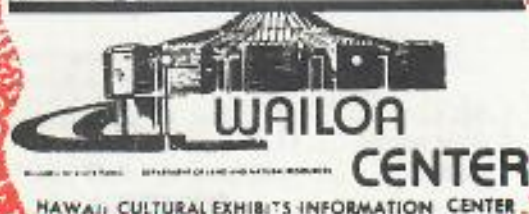
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POINTS OF INTEREST SADDLE ROAD 17

Mauna Kea Mountain: In Hawaiian means "White Mountain". Elevation 13,796 feet. Inactive volcano. Last eruption during the Ice Age.

Mauna Kea State Park: Pohakuloa area. Elevation 6,500 ft. Picnics, camping, hunting (with permit). Cabins available. Hale Pohaku; elevation 9,200 ft. Call Division of Parks and Recreation 885-4371 or write P.O. Box 936, Hilo 96720.

Mauna Loa Mountain: In Hawaiian means "Long Mountain". Last eruption July 1975.

University of Hawaii Institute of Astronomy: Top of Mauna Kea. Visit by permission. Site of 4 telescopes. Ph: 935-3371.

U.S. Weather Bureau Station: Elevation 11,000 ft. on Mauna Loa. Road to station branches off Saddle Road.

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POINTS OF INTEREST - PUNA

Anthuriums of Hawaii: Mountain View. Famous Toyama Red variety anthurium on view developed by owner. Open daily 8 a.m. to 5 p.m.

Chain of Craters Road: From Kalapana, the road used to connect to the Chain of Craters in the Hawaii Volcano National Park. Recent flows from the craters Alae and Makaopuhi have covered the road. Old Hawaiian villages are accessible as well as heiaus and petroglyph fields. Inquire for map at the Hawaii National Park Headquarters. Part of this road is blocked by recent flows.

Harry K. Brown Park: Route 13 also known as Kalapana Park. Picnic grounds, swimming in pond, hiking, surfing, and ancient heiau and village site. Pavilions and restrooms. Ideal for camping.

Honolulu Landing: "Smooth Landing", route 137, north from Kapoho. In the 19th century, this bay was used as a shipping port for coffee. Bad roads.

Isaac Hale Beach Park: Pohoiki Bay, route 137. Fishing, boating, swimming, surfing, picnics, camping, and hot springs near by. Pavilion and restrooms.

Kahua Beach: Famous as the Black Sands Beach of Kalapana. Picnics, surfing, swimming dangerous.

Kapoho: Village destroyed by the 1960 eruption. Along route 132. Cinder Cones from the 1955 and 1960 eruptions.

Lava Tree State Park: Route 132. Curious lava formations caused by molten lava coiling around tree trunks. Picnicking, hiking, pavilion and restroom.

Lava Flows: 1790, 1840, 1955, 1960. Located along the Puna rift from Kilauea crater to the sea. 1955 and 1960 flows destroyed farms, beach lots and homes. No lives were lost.

Lighthouse: Cape Kumakahi Lighthouse. The 1960 lava flow went around it. End of route 132.

Mac Kenzie State Park: Route 137. Fishing, camping, hiking on old Hawaiian trails. Pavilion and restroom.

Mountain Greenery: Keauau. Off route 13 in Keauau town. Wide selection of certified tropical plants. Available for hand carry and gift mailing. Open daily from 10 a.m. to 5 p.m.

Painted Church of Kalapana: Catholic Church, Star of the Sea, with beautifully painted murals. On route 137, just beyond Kalapana and Harry K. Brown Park. Work done by a Belgian priest in early days.

Puna Canoe Landing: Route 137, behind Painted Church. Remains of old landing used to launch canoes in the rough surf.

Puna Sugar Company: Located in Keauau town. Phone: 966-9242.

Puu Lapu "Haunted Hill": On road to Opihikao about .8 mile from Kalapana junction. Car rolls mysteriously uphill.

Queen's Bath: A lava encased fresh water pool. Swimming. Route 137, near entrance to National Park. Private grounds.

Sugar Mill: Keauau - An old Plantation Building restored into a unique Shopping Arcade. Phone: 966-9340.

Wahaula Heiau: Entrance to Hawaii Volcanoes National Park from Kalapana side. Museum and restored heiau, which was built by Paa'ao, a Tahitian priest.

Answers to Hawaii Heritage Trail page 18

1. Naha Stone Pinnac Stone, Kamehameha I
2. Rev. & Mrs. David Lyman, 1832, Christian
3. Catholic
4. 1859, English, Hawaiian
5. 53, 1790
6. 1910
7. 1st, 2nd, Koreans, Vietnam
8. 1967, 170, Urban, Renewal
9. 1969, District Engineer

MAY CALENDAR (continued)

- 21 Cub Scout Field Day in Kona
- 21 HAWAII ON HORSEBACK Old Pageantry Benefit for the Hawaii Heart Association. Anna's Ranch 1 p.m. \$5.00 for adults and \$2.50 for children. Hawaii County Band will be playing.
- 21 Amateur boxing at the Hilo Civic Auditorium.
- 24 DANCE HAWAII Community Dance Classes at Keauau Shipman Gym 3:30-5:30.
- 26 Music Festival at the Hilo Civic Auditorium.
- 26 HPA Baccalaureate Service 5:00 at the Davis Memorial Chapel Service by Edmund Browning of the Episcopal Diocese of Hawaii.
- 26 DANCE HAWAII Presentation at Keauau Shipman Gym 7:30 p.m.
- 26-29 7th Annual Woman's Fast Pitch Softball Tournament at the Victor Stadium and Carvalho Park.
- 26-30 State Badminton Tournament Hilo Armory.
- 27-30 U.S.S. BARBELL Navy Submarine will be in Kawaihae Harbor 11:00 - 12 noon.
- 27 HPA Graduation in School Gym 10:00 a.m.
- 27 HULA SHOW at Hale Halawai.
- 28 9th Annual Senior Citizens Picnic at the HILO CIVIC AUDITORIUM from 9:30-2:30 p.m. Free entertainment, prizes and contests. Open to all seniors 55 and older.
- 28 Amateur Boxing 7:30 p.m. Hilo Civic Auditorium.
- 28 MEMORIAL DAY REGATTA Kai Malia Canoe Club Hilo.
- 28-29 HONOKAA RODEO Waimea Race Track 12:00.
- 29 St. Joseph Graduation at the Hilo Civic Auditorium.
- 30 County Band to play at the VETERAN'S CEMETARY 9:45 a.m.
- 30 Catholic Mass for MEMORIAL DAY at Hilo Civic Auditorium.
- 30 MEMORIAL DAY Program Konaweana High School 10 a.m.
- 30 ALL GIRLS RODEO 10 a.m. Waimea Race Track.
- 31 MARTIAL ARTS SHOW 7 p.m. Hilo Civic Auditorium.

continued on page 43



KEAUU ?

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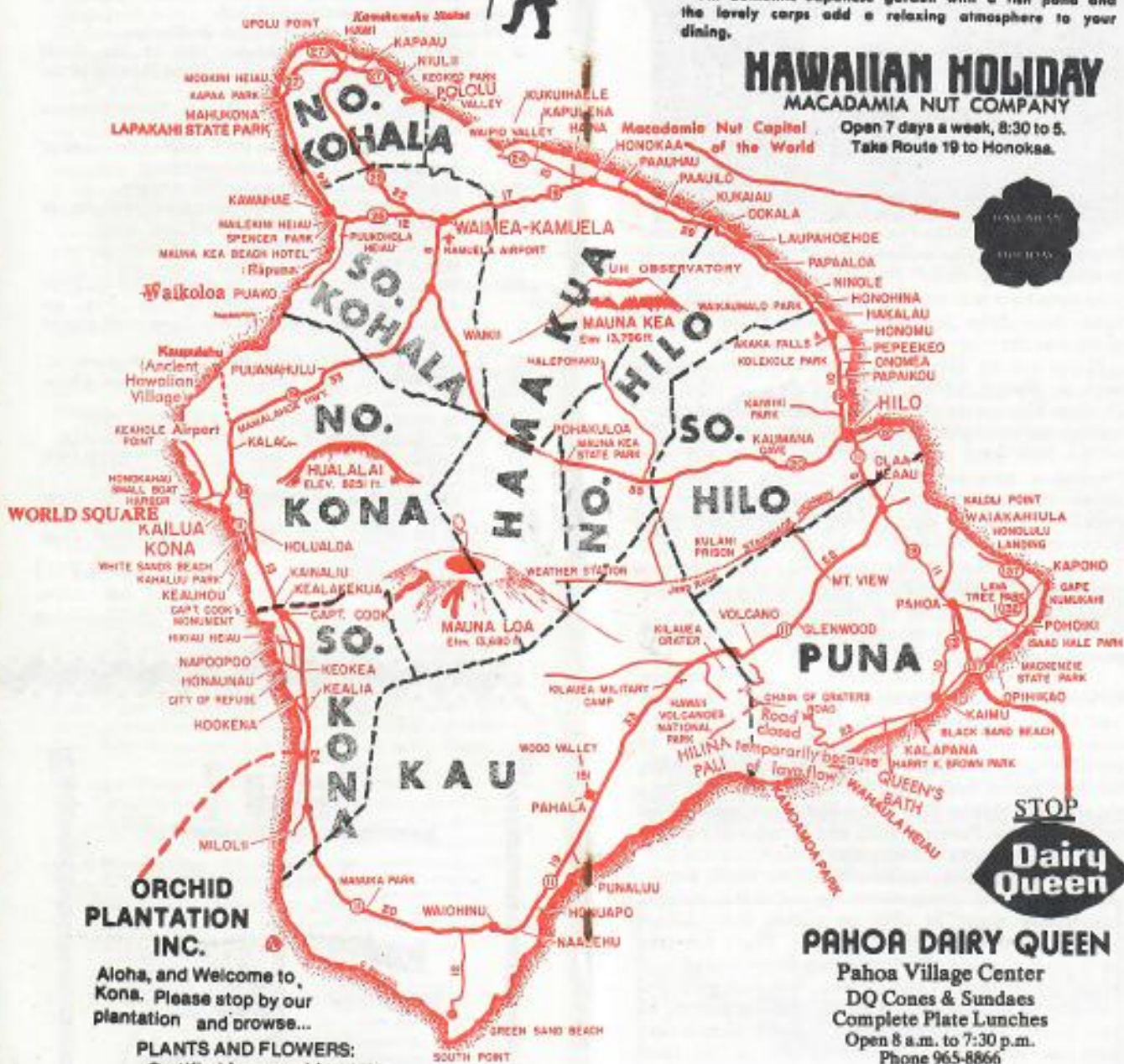
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If you are the adventurous spirit type you can also explore Waipio Valley, Pololu Valley, or visit the Douglas Monument above Laupahoehoe. For the hunter and the photographer this is the real Hawaii.

The best part of seeing these places with the "Hawaiian Sportsman", Frank Correia, is that he knows and loves this country, having been born and raised on Kukaiau Ranch, high up on Mauna Kea, above the sugar cane fields of the Hamakua Coast. For 25 years he worked for the ranch, and roamed the vast expanses of undulating kelley green carpets of pasture highlighted with stands of ohia, koa, and herds of Hereford cattle lazily nibbling at the grass or sleeping peacefully under the trees.

Quail, pheasants, chukkar partridge as well as sheep or wild boar are prizes waiting for the hunter in season and pastoral scenes or exotic landscapes under blue skies laced with wispy, white clouds can be caught by the photographer. Frank can also take you sight-seeing on the Famous Parker Ranch. If you happen to be a guest at the Mauna Kea Beach Hotel you are allowed to hunt on the Parker Ranch and Frank will be your guide on a hunt you will long remember.

After leaving Kukaiau Ranch in 1964 Frank helped organize Hawaii Trails which specialized in hunting and nature tours. In 1970 he started HAWAIIAN SPORTSMAN to extend this service. Frank can take up to three hunters on a hunt which is conducted in 4-wheel drive Toyota Land Cruiser. A fourth person is welcome to join them for the ride. There is hunting all year round for boars and rams. The bird season runs from the first weekend in November to the third weekend in January.

"There is a lot of game up there," declared Frank, "but we try to be selective, to get the best trophies. You don't have to come home empty-handed."

One of Frank's favorite tours is to the Douglas Monument, where the famous English botanist, David Douglas, was killed in 1834. The Douglas Fir Tree was

continued on page 43

KONA FUN AT NIGHT

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CAFE TERRACE: KEKAUOKA'S 6:30-8:30 p.m. Mondays.
BENNY PAIVA 6:30-8:30 p.m. Tuesdays to Sundays. LEHUA NANI 9-11 p.m. Monday to Friday.
BATIK ROOM: NA ALLI'S 6:30-12:30 a.m. Wednesday to Sunday. GLEN WILLIS 10-12 a.m. Saturday to Monday.
PAVILION: LEHUA NANI 8-10:30 nightly and on Tuesday from 6-8:30 for the Luau. GLEN WILLIS 8-10:30 p.m. Saturday to Monday and on Tuesday 7-11 p.m.

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SUNSET RIB LANAI: Dinner 6 p.m. nightly except Sunday.

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BILLFISH BAR: PHIL & DAVE 4-10 nightly except Sunday.
MARLIN ROOM: KONA GOLD 9-30-2:30 a.m. nightly except Mondays.
TORCH LIGHTLIG: 7 p.m. nightly.
LUAU: 6:30-9:30 p.m. Sunday, Tuesday & Friday.

KONA HILTON

WINDJAMMER'S LOUNGE: GLEN AUNA & WEST HAWAII 9-closing nightly except Monday. JOHN AUNA TRIO 8-closing on Monday.
RIB HALE ROOM: TONY SAVONNE 6:30-10:30 nightly.
LUAU: In the COCONUT GROVE 6 p.m. Sunday, Tuesday and Thursday.

KONA INN

WHALER'S BAR: BOBBY & TINO 5-9 nightly except Mon.
ROY ANTHONY & HIS GROUP 9-closing nightly except Sun.

KONA LAGOON HOTEL

FISHING SHACK LOUNGE: HULA TRIO 9-closing Monday & Tuesday. GENE PICKETT 9-closing Wednesday to Saturday.
WATER FRONT LOUNGE: DA-BOY'S 9-closing Monday to Saturday.
LUAU: 5:45 p.m. Tuesday, Thursday & Saturday Polynesian Show by AUNTIE KAY.

KONA SURF HOTEL

NALU TERRACE: BROTHER'S IN-LAW 4-6 p.m. Monday to Friday. ULU NAHIEHIE GROUP 5-7 p.m. Saturday & Sunday.
PUKA BAR: GREG YODER & RANDY 8-midnight nightly except Thursday.
POI POUNDER: TAHUNA POLYNESIAN REVUE 6 p.m. nightly. THE PARADISE 9-closing nightly.

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Captain Cook's Monument: Located across from Napoopoo on Kealahou Bay. Accessible only by boat or jeep trail.

The Grass Shack & Exhibition Hall: Kealahou - Coffee exhibits, Hawaiians, horticulture. Open daily 8:30 to 5 p.m.

Arthur L. Greenwell Park: Neighborhood playground and ball park. Captain Cook. Route 11.

Hikiau Heiau: The temple at which Captain Cook was worshipped as the returned god, Lono. Napoopoo Beach Park.

Honauunou City of Refuge: National Historical Park restored to early 1700's. Picnic area, fishing and swimming nearby. Scheduled talks daily. Phone 328-2326.

Honomalino Farms: The largest Macadamia Nut Orchard in the state. Over 4000 acres of macadamia nut trees. Next to Jimmy Stewart's Ranch.

Hookena Beach Park: 1 1/2 miles off route 11 in South Kona. Pavilion, restrooms, camping, fishing, boating and swimming.

Keel Park: Site of famous battle (1791), Napoopoo beach rd.

Kona Farmers Cooperative Mill: On Napoopoo road. Open to visitors by appointment. Call 328-2411. Coffee processed from bright red cherry to roasted bean.

Mauna Kea Coffee Company: Coffee processing plant. Open daily from 8 a.m. to 4 p.m. Phone 328-5211

Miloli: 5 miles off route 11. Quaint Hawaiian fishing village.

Napoopoo Beach Park: Overlooks famous Kealahou Bay and Captain Cook's Monument. Swimming, fishing, boating, picnicking, pavilion and restrooms. Lei seller's stand.

Orchid Plantation Inc.: On highway 11 about 6 miles south of Hookena. Certified plants and flowers shipped for you.

Painted Church: St. Benedict's Catholic Church with beautifully painted murals. On middle Keea road off route 16.

Sausage Trees: Located at junction of routes 11 & 16. Weird sausage like fruits.

Rodney J. T. Yano Memorial Building: Recreation, education and office complex located in Greenwell Park in Captain Cook. Phone 323-3046



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POINTS OF INTEREST - NORTH KONA

Ahuena Heiau: On point across from King Kamehameha Hotel. Kamehameha's personal temple and death place.

Dal Fukuji Temple: Honalo, Route 11, Buddhist art.

Deep Sea Fishing & Glass Bottom Boats: Year round season. Boats available for charter at Kailua wharf.

Hale Halawai: Kailua, next to Kona Inn. "Meeting House". Conventions and Cultural activities. Ph: 329-1989.

Honokahau Boat Harbor: Off route 19. Small boat harbor 4 miles north of Kailua.

Hualalai Mountains: Elevation 8,251 ft.

Hulhee Palace: Summer home of King Kalakaua. Museum of Hawaiiana built in 1838 by Gov. John Kuakini. Open Mon. to Fri. 9 a.m. to 4 p.m. and Sat. from 9 a.m. to 12 noon. Closed on Sun. and holidays. Phone: 329-1877.

Judd Trails: Overgrown ancient trail that goes over Hualalai. Starts south of Kailua.

Kahaluu Beach Park: 5 miles south of Kailua. Pavilions, restrooms, picnics, fishing swimming and surfing.

Kamakohou: Across from King Kamehameha Hotel. Site of Ahuena heiau and the house in which Kamehameha the Great died in 1819.

Kaupulehu Lava Flow: North of Kailua, 1801.

Keahole Point: Site of Kona airport. 8 miles north of Kailua.

Keauhou Beach: Birthplace of King Kamehameha III. Black sand beach and small boat harbor. Royal slide was near by where royalty tobogganed on a wooden sled down a rock wall covered with grass and Ti leaves. Keauhou-Kona resort.

Kona Arts Center and Little Gallery: Activities and exhibitions. Open daily except Sun. & Mon. from 10 a.m. to 4 p.m. Located in Holualoa.

Mokuauia Church: Oldest church building in Hawaii and the first Christian Church built with lava rock and with Ohia beams and timbers, completed in 1837. Kailua.

Old Kona Airport: Kailua-Kona. State beach park.

Puuwaawaa: A mountain shaped like an upside-down cupcake. Site of Puuwaawaa Ranch and Volcanite quarry. Rt. 19.

Saint Michael's Church: Kailua. One of the first Catholic churches in the islands. Coral shrine in yard.

Saint Peter's Church: "The Little Blue Church by the Sea". Next to Kahaluu Beach Park.

White Sand Beach: "Disappearing Sands". White sand beach which periodically washes away. Swimming and body surfing. About 3 miles south of Kailua. Park next to the beach.

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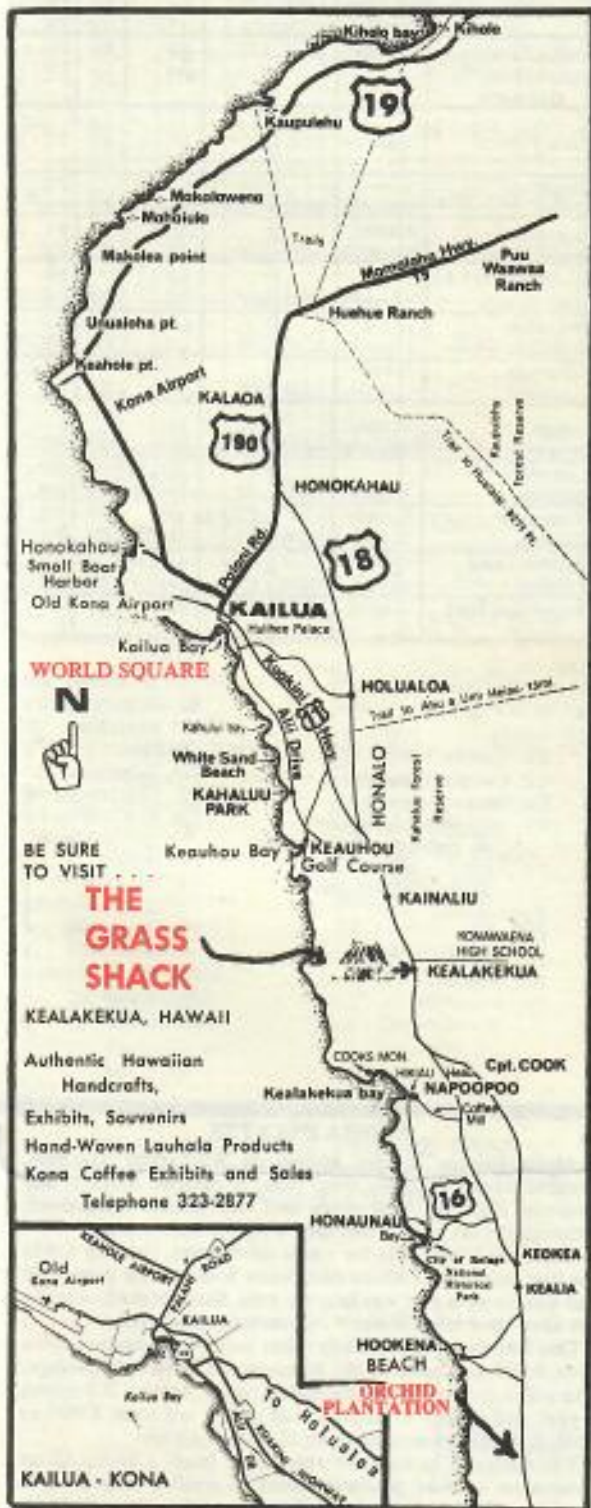
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KONA



HAWAII ISLE REAL ESTATE GUIDE

Name of the Subdivision	A	B	C	D	E	F
Ainaloa	12,000	18M	C3 C5	D4	E1	F6 F8
Aloha Estates (Anthurium Gardens)	12,000	18M	C1 C5	D3 D4	E1	F5 F6
Fern Forest	3 acres	22M	C4	D3 D4	E1	F7
Hawaiian Acres	1.8- 3 acres	14M	C4 C5	D4	E2	F5 F8, 6
Hawaiian Beaches, Parks	9,000- 21,000	25M	C1	D1 D4	E3	F1, 2 F4
Hawaiian Fern Acres	2 acres	19M	C4	D3 D4	E1	F6 F7
Hawaiian Paradise Park	1/2 & 1 acre	15M	C5	D4	E3	F5 F6, 8
Kalapana Gardens	7,500- 8,000	35M	C5	D3 D4	E1	F1, 6 F4, 5
Kehena Beach	8,000- 12,000	40M	C2	D1 D4	E1	F7
Liliant Estates	1 acre	24M	C1 C2	D1, 3 D4	E1	F3 F8
Nanawale Estates	7,500- 9,000	24M	C1, 3 C5	D1 D4	E3	F3, 4 F6
Orchid Land Estates	1-3 acres	15M	C4	D2, 3 D4	E3	F6 F7
Royal Gardens	1 acre	40M	C5	D4	E2	F7

Key:

- A. Size of lot
B. Miles to Hilo
C. Roads
C1 County road
C2 County standard
C3 Private-paved
C4 Private-substandard
no regular maintenance
C5 Private-substandard
some maintenance
D. Vegetation
D1 Lush
D2 Sparse
D3 Wooded
D4 Variable

E. Climate

- E1 Relatively wet
E2 Relatively dry
E3 Variable
F. Utilities
F1 Telephone
F2 Electricity in
F3 Electricity by
the developer
F4 Water
F5 Buyer's
responsibility
F6 Depending on
location
F7 No utilities
F8 Water by
catchment

ALOHA ESTATES

Aloha Estates is also known as Anthurium Gardens. Located about 17 miles from Hilo, it extends north of the Volcano Highway. The roads are very poorly maintained, although the tax maps states they are government roads.

There are 1846 lots in the whole subdivision, but only 859 in the first increment. About one dozen houses have been built and electricity is part way into the area. Some of the houses do not have electricity. Water is by catchment into tanks.

One landowner successfully raises anthuriums under hapu'u (tree ferns) and most of the homeowners have lush gardens. The soil is rich and deep. Rainfall is heavy, around 200 inches a year and foliage is tropical. Lot prices are from \$3500 to 6500, and lot sizes are almost all 12,000 square feet.

For someone looking for reasonable land, a lot in Aloha Estates on or near power is about as good a bargain as is available. Since so much of Puna is rocky, the soil is its greatest asset.

HAWAII ISLE REAL ESTATE GUIDE

	G	H	I	J	K	L	Price Range
Yes	H5 H6	I2 I3	J2	K2 K3	L4		\$2,500-7,000
Yes	H5 H6	I2	J1 J2	K3	L3		\$4,000-10,000
No	H2, 4 H5, 6	I4	J1	K3	L4		\$4,500-8,500
No	H2, 4 H5, 6	I1	J2	K2 K3	L1 L2		\$4,500-10,000
Yes	H5 H6	I1	J3	K2 K3	L1 L3		\$6,500-14,000
No	H1, 2, 4 H5 & 6	I1	J1	K3	L4		\$4,500-7,000
Yes	H5 H6	I1	J3	K2	L2		\$4,500-25,000
Yes	H5 H6	I4	J2	K2 K3	L3		\$5,000-7,000
Yes	H5 H6	I4	J1	K2 K3	L1		\$9,000-20,000
Yes	H1, 2, 4 H5 & 6	I2	J2	K2 K3	L3		\$4,500-8,000
Yes	H5 H6	I2	J2	K2 K3	L3		\$3,000-5,500
No	H1, 2, 4 H5 & 6	I4	J2	K2 K3	L1, 2 L3		\$4,500-15,000
---	H6	I4	J1	K3	L1 L3		\$4,500-16,500

G. Building & Use restrictions

- H. Possible Uses
H1 Farming tree crops
H2 Diversified farming
H3 Cattle
H4 Flowers
H5 Residential
H6 Speculative
I. Community Association
I1 Voluntary
I2 Mandatory
I3 Depends on location

J. Development progress

- J1 Poor
J2 Fair
J3 Good
K. Investment potential
K1 Short range
K2 Med m range
K3 Long range
L. Subdivision View
L1 Ocean view lots
L2 Mountain view lots
L3 No view
L4 Depends on location

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Ingrid Correia "had a calling to come to Hawaii". This is the way she explains her move from the San Fernando Valley in California to Waimea 12 years ago. At first she lived in Hilo and was attending Hilo College when she met Frank Correia. It wasn't long before a romance that started on a horseback date culminated in marriage to Frank. They have a daughter, Heidi, who attends Waimea Elementary School.

Until recently Ingrid spent most of her time taking care of her family and helping Frank in his business. Several months ago Frank encouraged her to go into business for herself so she opened the MACADAMIA NUTS Store in the Parker Ranch Shopping Center. They both felt there was a need for Waimea residents and visitors to be able to buy Macadamia nuts locally and in a natural state. Ingrid believes in simplicity, and what could be better than "Macadamia Nuts" to describe her business; so that was the name she chose.

A pretty, vivacious young woman, Ingrid has made her store an expression of her philosophy of naturalness, simplicity, and tastefulness. She has incorporated old but still useful items such as wooden school desks used for display and boards from a sugar cane flume have been made into attractive "old time" signs which decorate the walls. There is a rocking chair which beckons you to rest awhile and chat about the island. Ingrid will happily supply you with a map and offer helpful suggestions so you will get the most out of your day of sight seeing. You can also try cracking this unusual and flavorful nut as there is a sturdy hand made nut cracker mounted on one of the school desks. On her shelves you can choose from a varied display of top quality of macadamia nuts; just right for gifts or snacking, as you continue your tour of the island.

The only process used in preparing these nuts is drying the nut in the shell. She buys the nut from local farmers and has them cracked open and packaged. They are salt free and without added oil. The natural flavor is fresh and the texture is crispy.

The Correias have started the macadamia nut orchard to insure their supply but it takes 7-9 years for a tree to bear its first crop. In the meantime, Ingrid is having a ball watching her business grow and adding decorative inventory. You mustn't go through Waimea without stopping at the Parker Ranch Shopping Center and making a point of visiting MACADAMIA NUTS. It is an unique and fascinating shopping experience you can't afford to miss and after you meet Ingrid you will know why.

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HORSEBACK RIDING: Mauna Kea Beach Hotel 882-7222 ext. 236 Waikoloa Stables Phone 883-9335.

HUNTING: Pigs, goats, sheep, and birds subject to Regulation 23. Season from 1st weekend in November to 3rd week in January for license 961-7200.

SELF-DEFENSE and MARTIAL ARTS: Waiakea Recreational Center Kamehameha Ave. near Laukapu Phone 964-1480.

SENIOR CITIZENS MEETINGS: HILO Hui Aloha Phone 935-8363. KONA Kailua Phone: 329-1989, Captain Cook Phone 323-3046.

SWIMMING: HILO Hoolulu Pool 935-8970, NAS Pool 935-5379, YWCA Pool 935-1536, HONOKAA Pool at High School 775-0650, KOHALA Kamehameha Park 899-6933, KA'U Pool at High School 928-8170.

TENNIS COURTS: HILO Hoolulu Park, Lincoln Park, University of Hawaii at Hilo, Hilo Yacht Club and Waiakea Village Hotel. HAKALAU Park, PAPAALOA Park, HONOKAA at High School, WAIMEA Park, NORTH KOHALA Kamehameha Park, SOUTH KOHALA Mauna Kea Beach Hotel and Kona Surf Hotel SOUTH KONA Greenwell Park Captain Cook, NAALEHU Park, PAHALA at High School and VOLCANO Kilauea Military Camp.

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| 16 | (Filipino attractions) |
| 17 | (Japanese attractions) |
| 18-22 | A Star Is Born-St. Ives |
| 23-24 | Executioners from Shaolin (Chinese) |
| 25 | (rental engagement) |
| 26-29 | A Star Is Born-St. Ives |
| 30 | (Filipino attractions) |
| 31 | Magnificent Wanderers (Chinese) |

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POINTS OF INTEREST - KA'U

Birthplace of Henry Opukahaia: Punaluu, off Highway 11. As a boy, Henry went to England and was converted to Christianity. It was due to his influence that missionaries came to Hawaii.

Crater Rim Road: An 11.1 mile drive into and around the summit caldera of Kilauea crater, across both rift zones and through rain forests and volcanic deserts.

Devastation Trail: A half-mile boardwalk over lava burned land and twisted trees caused by Kilauea Iki in 1959. Located in Hawaii Volcano National Park. Phone: 967-7311.

Green Sands Beach: 3 mile hiking trail going north east of South Point.

Halemaumau Lookout: A glimpse at Kilauea's most active vent. Located inside Hawaii Volcano National Park.

Halemaumau Trail: Trail across Kilauea Crater from Volcano House to Halemaumau.

Hawaii Volcanoes National Park: Headquarters open daily. M-F 7:30 a.m. to 5 p.m. Sat. and Sun. 6 a.m. to 5 p.m. Movies shown every hour on the hour from 9 a.m. to 4 p.m. Japanese version by advance request, only at 11:30 a.m. Phone: 967-7311.

Honuaopu: Rt. 11, site of the old Hutchinson Sugar Mill. Home of Haauau O Ka'u community Cultural Center.

Ka'u Sugar Mill: Pahala town. Phone 928-8311.

Kilauea Crater: Top of Kilauea mountain. Still periodically an active volcano. Halemaumau pit within is the legendary home of Madame Pele, goddess of the Volcanoes. Last eruption of Kilauea Volcano was Nov 29, 1975. Call 967-7977.

Kilauea Military Camp: A rest and recreational camp within the National Park. Phone 967-7315.

Kilauea Visitors Center: Programs by park naturalists and movies of recent volcanic eruptions shown daily.

Lava Flows: 1868, 1887, 1907. On the south west side of Mauna Loa on route 11. H.V.B. Warrior Sign.

Manuka State Park: Route 11. 1 mile Ka'u side of Kona border. State botanical park of native and imported plants. Camping, picnic areas, restrooms.

Mark Twain Monkeypod Tree: Waiohinu, route 11. This tree was planted by Mark Twain during an extended visit. A storm blew it over, but the roots have sent up a new shoot.

Mauna Loa: Meaning "Long Mountain" in Hawaiian. Elevation 13,680 feet.

Mokuaweweoe: Active volcano crater on top of Mauna Loa. Park service cabin available for hardy hikers. About 13,000 feet.

Namakanani Palao: Picnic area within National Park. Cabins available, contact Volcano House.

Punaluu Beach Park: Pavilion, picnicking, camping, fishing, swimming, surfing, restrooms, and lei seller's stand.

South Point: Southern most point of the U.S. Polynesians landed here first as early as 1500 A.D. Ancient canoe moorings set in solid rock. Kalalea heiau.

South Point Tracking Station: Radar finder, located on road to South Point.

Thomas Jaggar Memorial Museum: Hawaii Volcanoes National Park. Informative center about Volcanoes.

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LEGENDS OF HAWAII



Legend Of The Boy Who Invented The Sail

Paakaa lived on an island in the Pacific with his mother. He was an adventuresome boy who at a very early age had learned to swim, surf, fish and to hew out a canoe. His mother had told him about his father who lived in Waipio Valley on the Island of Hawaii, whom he had never seen. All his training was aimed at just one thing, to cross the water between the islands to see his father.

He kept wondering how he could handle his canoe out in the deep water. He knew he would not make it with his paddles. He thought about this day and night. He would look at the trees and grass and see how the wind would move them. One day he got an idea. He looked for two high poles, they were twice as big as he was. He gathered long leaves from the Lauhala tree and wove them into square mats. He fastened these mats to the poles and put them on his canoe. When everything was in readiness he stepped in his canoe and paddled out to the deep water. His family and friends all watched him paddle out in this strange contraption and laughed. Their laughter changed to utter amazement when they saw Paakaa skim over the ocean at a great speed and come gliding in to shore ahead of the canoes of the men.

Paakaa was delighted with his invention and knew that he had found a way of crossing the ocean to see his father.

POINTS OF INTEREST - KA'U

Thurston Lava Tube: Located in the National Park it is a 450-foot long tunnel formed by a hardened outer crust of a lava flow in prehistoric times.

Volcano House: Beautiful hotel and restaurant overlooking Kilauea Crater in the National Park. Phone 967-7321.

Volcano Arts Center: Next to the Hawaii National Park Headquarters. Site of the original Volcano House. Crafts, paintings, and classes. Phone: 967-7511.

Waiohinu Roadside Park: Off rt. 11, restroom and picnic area, neighborhood playground.

Whitington Beach Park: Off route 11 at Honuaopu. Road branches to ocean across from old sugar mill. Picnic areas, camping, fishing, swimming, restrooms, pavilions.

Wood Valley: Road winds up into mountains and homestead area behind Pahala town.

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POINTS OF INTEREST NORTH HILO, HAMAKUA & HONOKAA MACADAMIA NUT CAPITAL

Brandley Center: Rehabilitation center for the handicapped located in Honokaa off highway 19. Beautiful handmade items on sale. Hours are from 8 a.m. to 3:30 p.m. Phone: 775-0682.

Honokaa Sugar Company: At Haina. Phone: 775-7261.

Laupahoehoe Peninsula Park: On the peninsula 24 miles north of Hilo on route 19. Pavilions, camping, picnicking and restrooms. Swimming and fishing hazardous. Monument to 1946 tidal wave victims.

Laupahoehoe Sugar Company: At Pasaulo. Phone: 962-6314.

Mamalahoa Highway: Scenic route, the old and only major automobile road around the island. Lined with beautiful trees and palms.

Hawaiian Holidays Macadamia Nut Factory: Honokaa. From Kona take the new coast highway, Rt. 19, or inland highway, Rt. 190, for a scenic drive through lava fields to Parker Ranch country and the Macadamia Nut Capital of the World. Open daily 8:30 a.m. to 5 p.m. Phone: 775-7743

Kama'aina Woods: Honokaa - on road to Haina. Locally made woods and crafts. Phone: 775-7722

HAWAIIAN ZODIAC BIRTH SIGNS BY THE MONTH

WELO (Apr.-May) The man born during WELO will be an illustrious person & his children will follow in his footsteps. His chief skill will be in divination & counseling.

IKIHIKI (May-June) A man born during the month of IKIHIKI will be a man fond of farming. He will always want many people about him in his home, but his own family will be first in his affections.

JUNE CALENDAR

- 3 CYO Dance at Hale Halawai.
- 3 Kona Village Luncheon 11:30 - 2:00 p.m.
- 4 Installation Luncheon Program Hilo Woman's Club Kiloana Room, Naniloa Surf Hotel for information call 964-5030.
- 5 Kona Kennel Club DOG SHOW at Hale Halawai.
- 7 Hilo High School GRADUATION guest speaker Patsy Mink.
- 11 KING KAMEHAMEHA DAY.
- 11 Kamehameha Day REGATTA Kai Opua Cance Club Kona.
- 11 DAUGHTERS OF HAWAII 50th Anniversary HULIHEE PALACE 11-5 p.m. bazaar

named after him and Frank's father helped erect a stone monument to the botanist on the slopes of Mauna Kea.

Frank is married to Ingrid and they have one child, Heidi Nile, called that because Frank admires Egyptian culture. Ingrid used to help Frank in his business but not keeps busy with her own shop. To know this Kamaaina family is to experience Hawaiian Aloha and a trip up the mountain with Frank will be a different and exciting Hawaiian tour.

POINTS OF INTEREST NORTH HILO, HAMAKUA & HONOKAA

Kalapa State Park: Located about 3 miles south of Honokaa. A state park with cabins and community hall. Peaceful forest surrounds it. Call 961-7200 for information and reservations.

Waikamalo Park: Off route 19 near Honohina. Pavilion, camping, hiking, swimming in river. Restroom facilities. A charming retreat.

Waipio Lookout: On route 24 which branches off at Honokaa. 10 miles to end of road. Pavilion, restrooms, camping, hiking down into Waipio Valley.

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Honokaa, HI. 96727
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POINTS OF INTEREST - SOUTH KOHALA

Anaehoomalu Bay: White sand beach, old Hawaiian fishponds, petroglyph field, picnic area, restrooms and showers.

Hapuna Beach Park: 3 miles south of Kawaihae. White sand beach, swimming and camping. Pavilions and restrooms.

Hawaii Preparatory Academy: Kamuela. Private co-educational boarding school. Phone: 885-4108.

Imiola Church: Off Rt. 19 in Kamuela. Old church (1832). Beautiful koa wood interior. HVB warrior sign.

Kamuela Museum: Route 25. Exhibitions of old Hawaiiana.

Kawaihae Harbor: A deep water port.

Kohala Mountains: Elevation 5,480 ft. Oldest mountains on the island.

Mallekini Heiau: Near Kawaihae, on road to Spencer Park. An ancient temple site.

Mauna Kea Beach Hotel and Golf Course: 1 mile south of Kawaihae. Fabulous resort developed by Laurence Rockefeller.

Parker Ranch: Kamuela. One of the largest ranches in the U.S. 325,000 acres. Phone 885-7311 for information.

Parker Ranch Visitors Center: See the John Palmer Parker Museum depicting the Parker family history. Thelma Parker Theatre offering a color slide presentation of the Parker Ranch story and the Duke Kahanamoku Museum. Phone 885-7311.

Petroglyphs: Built about 1580 by Lonoikamakahiki and rebuilt by King Kamehameha I about 1791 and dedicated to his war god. Kukailimoku. Off highway 27 before Kawaihae and Spencer Park roads. Phone 882-7018.

Samuel Spencer Beach Park: Off route 27, south of Kawaihae. Swimming, camping, picnicking, fishing, pavilions and restrooms.

Waikoloa Village: Via route 19, 17 miles from Waimea. 18 hole championship golf course, stables, tennis courts, swimming pool, a complete club house with pro shop, lounge, locker rooms, restaurant and bar.

POINTS OF INTEREST NORTH KOHALA

Kahua Ranch Roadside Park: On route 25 at top of mountain. Pavilion picnic area. Spectacular view of coastline.

Kalahikiola Church: Off route 27, east of Hawi. Congregational. Built in 1855. HVB warrior sign.

Kamehameha Park: On route 27 east of Hawi. Ball park, tennis courts, swimming pool, and grandstand. Restrooms.

Kamehameha Statue: On route 27, at Kapsau, east of Hawi. Original statue recovered from sea after the Honolulu statue was erected. Located on the court house grounds. Kohala is the birthplace of King Kamehameha I.

Kapaa Beach Park: Route 27 on way to Mahukona. Fishing, pavilion, restrooms. No fresh water.

Keokeo Beach Park: Off route 27 at Niuli, east of Kohala. Pavilions, restrooms, picnicking, camping, hiking, swimming and fishing. Old heiau near by.

Lapakahi State Park: An historical park. Located on highway 27 one mile south of Mahukona. Ancient Hawaiian village site. Open daily. Ph: 889-5566.

Loran Transmitting Station: Upolu Point. U.S. Coast Guard Station.

Mahukona Beach Park: Mahukona. Route 27. Boating, swimming, fishing, camping, pavilions and restrooms.

Mookini Heiau: Built by Pa'ao early Hawaiian priest from Tahiti. Take road to Upolu airport and turn west, about 1 mile.

Pololu Valley Lookout: Route 27 extreme N.E. end of island. Scenic lookout and trail to beach.

Upolu Point: Northern tip of island, emergency airfield.

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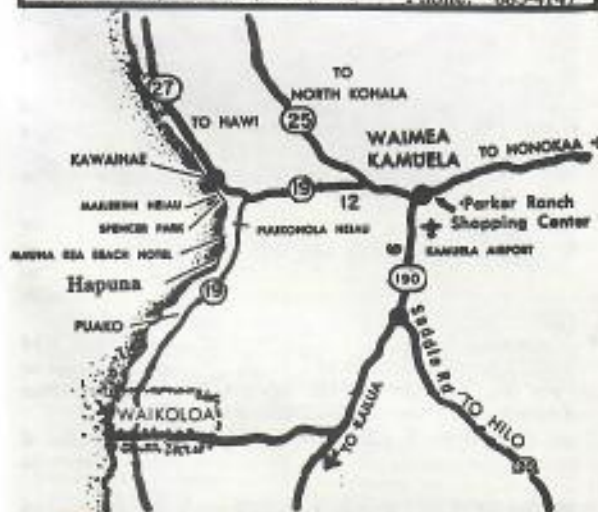
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landmark estates

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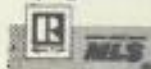
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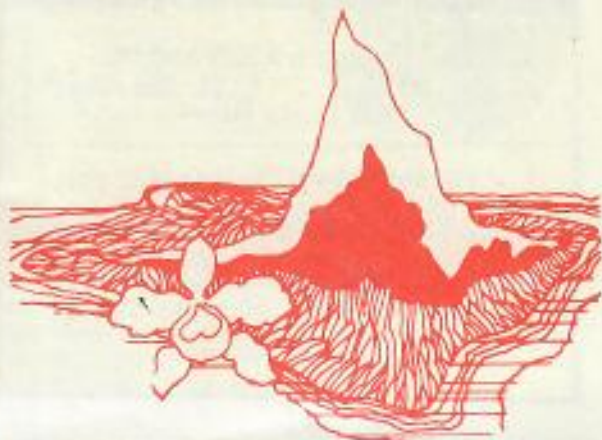
HAWAII ISLE GUIDE

A COMPREHENSIVE GUIDE TO THE SIGHTS AND ACTIVITIES ON THE BIG ISLAND OF HAWAII

MAY 1977



HAWAII ON HORSEBACK
AT ANNA'S RANCH





University of Hawaii at Manoa

Hawaii Institute of Marine Biology
P.O.Box 1346 • Coconut Island • Kaneohe, Hawaii 96744
Cable Address: UNIHAW

10 March 1981

Mr. Charles K. Supe
Hawaii Branch Chief
Division of Conservation &
Resources Enforcement
PO Box 936
Hilo, Hawaii 96720

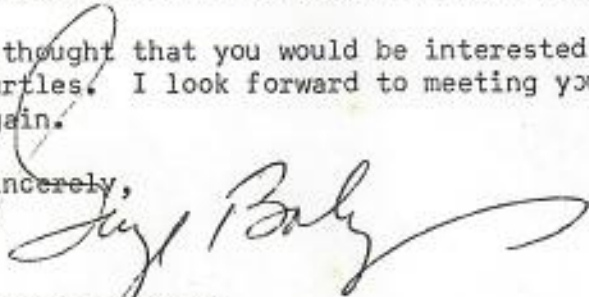
Dear Mr. Supe:

I want to thank you very much for your letter of February 26th which provided information on turtles at Kaalualu during 1980. As you may recall, I have previously tagged turtles at this important location on several occasions. It would probably be very worthwhile for me to return there in the not to future for additional tagging. Most of my efforts during the past year on the Big Island have been directed at Kiholo Bay. I have found this site to be a critical feeding and sleeping area for immature green turtles.

How frequently do your officers encounter poaching of turtles on the Big Island? Do you get many reports of violations? I know that a definite problem exists near Punaluu (Kau), in that every time I survey the lava coastline I come across the gutted-out remains of turtles.

I thought that you would be interested in the enclosed material on sea turtles. I look forward to meeting you in person when I get to Hilo again.

Sincerely,


George H. Balazs

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF CONSERVATION AND RESOURCES ENFORCEMENT

1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

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WATER AND LAND DEVELOPMENT

FILE NO.

April 21, 82

GEORGE

Enclosed a complete copy of chest 124

Re turtle poster.

HAWAII
Send 2 copies
(one for Kona).

DOCKRE
PO. Box. 936
Hilo 96720
Attn C. Supe.

KAUAI

DOCKRE
3060 EIWA ST.
LIHUE KAUI 96736
attn T. NAKAMURA

Aloha
Brown



University of Hawaii at Manoa

Marine Option Program

1000 Pope Road, Room 229 • Honolulu, Hawaii 96822

Telephone: (808) 948-8433

January 21, 1985

MEMORANDUM

TO: Kenji Sumida
V.C. for Administration

VIA: Jack R. Davidson
Director, UH Sea Grant College Program
Jack Davidson

FROM: Anne M. Orcutt *Anne M. Orcutt*
Coordinator

SUBJECT: Room Use Request for Student Symposium

On Saturday morning, March 9, the Marine Option Program is sponsoring a symposium for our students to present the results of their 1984-85 projects. MOP students from throughout the state will be given an opportunity to make oral presentations to the public and discuss their findings with peers and professionals. The papers will be judged for awards and abstracts will be published. I would like to hold this event in our auditorium downstairs (Marine Science Building 114) which is usually secured on the weekends, and, therefore, request your permission for its use. Additionally, since this is a student symposium for which no admission is charged, could the air conditioning charge be waived. Thank you for your consideration.

xc: Facilities Management
Sea Grant
MOP Coordinators ✓

AO:li

BOX 4500, KALAPANA, HAWAII 96778



George Balays
Bx 3830
Honolulu, HI 96812

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Home: _____

Office: _____

place name & address on reverse side.

* Programs subject to change. You will be informed about current schedule.




9/5/84

Aloha George -
Thank you for the information
sent about the green turtles.

The turtles and Hawaiian
hawk ("Io") are rather common
here, so they became our

logo - also because they are
endangered + we wish to
raise consciousness about
their need for preservation.

also the logo  is
inspired by the Japanese
symbol for peaceful,
prosperous long
life. The



H.A.B.

Lawak + Turtle bespeak
Kalam Honua which means
"harmony of heaven and earth".

We welcome your visit
and would be happy to
accommodate you in exchange
for a lecture (+ possible slide
presentation?) re: the turtles.

Best wishes in your
good work

Poster ✓
Mid-Pac ✓
Protected
people? ✓
Sighting cards ✓
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Kamaeana ✓


RICHARD KOOB

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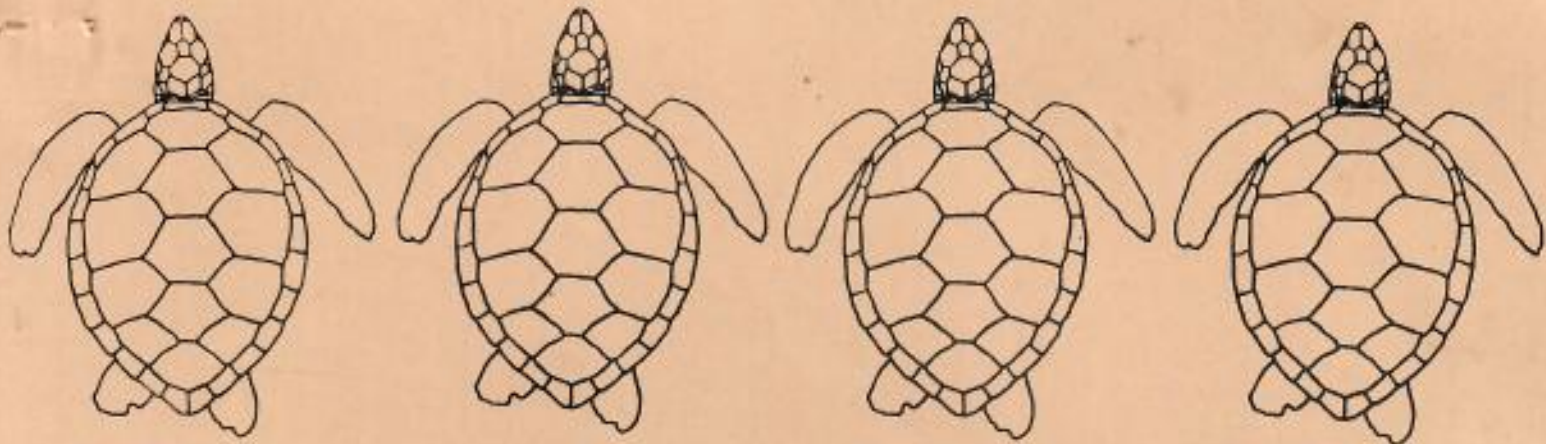
JULY 30, 1991 * FOR IMMEDIATE RELEASE * On July 1, 1991 agents of the State Department of Conservation & Resource Enforcement (DOCARE) investigated the report of a dead sea turtle in a vacant area off Shower Drive in Hawaiian Paradise Park. They found a female Pacific Green Sea Turtle (*Chelonia mydas agassizi*) weighing approximately 250 pounds with no visible injuries or disease (tumors). It was apparent from flipper marks and the disturbance of the area that the sea turtle had been alive when abandoned miles from the ocean. The turtle was tagged in 1984 and had been observed basking in the sun and twice nesting at French Frigate Shoals from 1984 - 89.

While talking with enforcement officials about this incident, Greenpeace Hawaii learned that two smaller Green Sea Turtles had been found dead on the side of Kahakai Boulevard, Hawaiian Beaches, in April of this year. These turtles also had no visible signs of injury.

The Pacific Green Sea Turtle is fully protected under the Endangered Species Act. Violators of this Act face Federal and State penalties of up to \$25,000. in fines and one year in jail. It is illegal to take, harrass or impact a sea turtle in any manner. Even grabbing onto their shells while swimming or diving is a violation of State and Federal laws.

There are only 750 mature females in Hawaii. The dead female found in Paradise Park was a proven bearer and could have laid up to 3 clutches of 100 eggs each per nesting season for the rest of her life. This makes her loss particularly tragic.

Greenpeace Hawaii is offering a reward for information leading to the apprehension and conviction of the persons responsible for the death of this sea turtle. Anyone with information about this incident can call: State Dept. of Conservation & Resource Enforcement 933-4291, National Marine Fisheries Service (Honolulu) 1-541-2727, U.S. Fish & Wildlife Service (Honolulu) 1-541-2682 or Greenpeace Hawaii 935-0770. Also, if you see anyone taking or harming a sea turtle, obtain as much information as you can -- time, location, vehicle license number, description of individuals involved, names and phone numbers of additional witnesses -- and call any of the agencies listed above. The sea turtles need our protection. Thank you for your help.



REWARD

FOR INFORMATION LEADING TO THE APPREHENSION AND CONVICTION OF THE PERSONS WHO CAUSED THE DEATH OF A PACIFIC GREEN SEA TURTLE. DISCOVERED ON JULY 1, 1991, THE 250 LB. SEA TURTLE WAS REMOVED FROM THE OCEAN AND ABANDONED -- ALIVE -- IN A VACANT AREA OFF SHOWER DRIVE IN HAWAIIAN PARADISE PARK SUBDIVISION, PUNA. THE SEA TURTLE WAS TAGGED AND HAD BEEN OBSERVED FROM 1984 THROUGH 1989 BASKING IN THE SUN AND TWICE NESTING AT FRENCH FRIGATE SHOALS. WITH ESTIMATES OF ONLY 750 MATURE FEMALES IN THE STATE, THE LOSS OF THIS NESTING FEMALE IS PARTICULARLY DEVASTATING.

THE GREEN SEA TURTLE LIVES IN THE OCEAN WATERS SURROUNDING HAWAII AND IS FULLY PROTECTED BY STATE AND FEDERAL LAWS. HARMING A TURTLE IS A VIOLATION OF THE ENDANGERED SPECIES ACT WITH PENALTIES OF UP TO \$25,000, AND/OR ONE YEAR IN JAIL.

IF YOU HAVE INFORMATION REGARDING THIS INCIDENT OR SEE SOMEONE TAKING OR HARMING A SEA TURTLE,

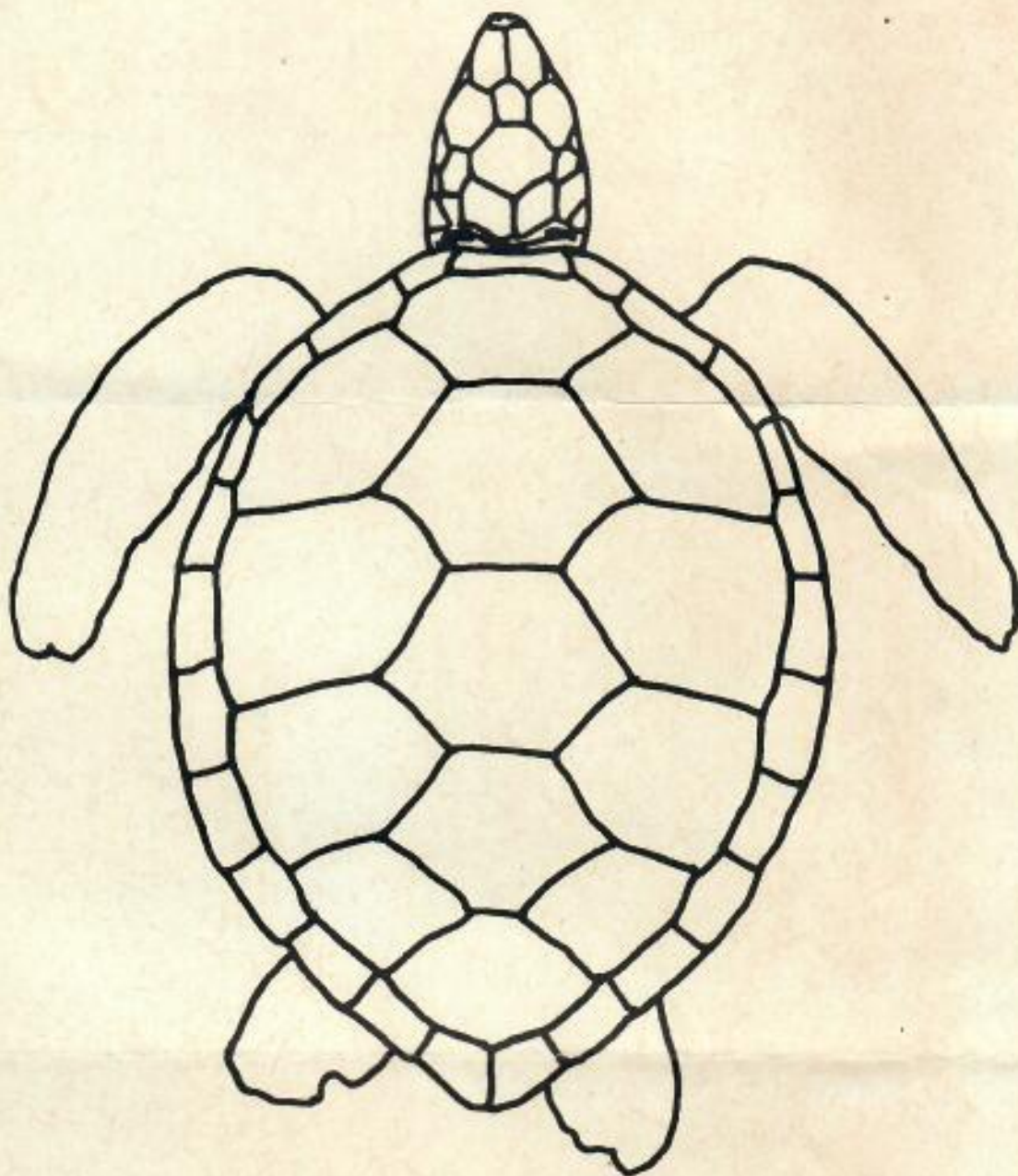
PLEASE CALL:

STATE DEPT. OF CONSERVATION & RESOURCE ENFORCEMENT
NATIONAL MARINE FISHERIES SERVICE (HONOLULU)
U.S. FISH & WILDLIFE SERVICE (HONOLULU)
GREENPEACE HAWAII

933-4291
1-541-2727
1-541-2682
935-0770

SOURCES WILL BE TREATED CONFIDENTIALLY.

GREEN



Common Name: Pacific Green Sea Turtle

Named For: Color of its fat

Scientific Name: *Chelonia mydas agassizi*

Hawaiian Name: Honu

Status: Threatened

Average Size: 200-250 pounds with 3½ foot shell

Shell Color: Olive brown with darker streaks

Habitat: Central and tropical water; inside reefs and bays.

Food: Mostly herbivorous - eats sea grasses, algae, occasionally small crustaceans

Threats: Commercial fishing, pollution, habitat destruction

TELEPHONE



United States Department of the Interior

NATIONAL PARK SERVICE
HAWAII VOLCANOES NATIONAL PARK
HAWAII 96718

9-21-82
965-8936
Telephoned
Francis
KUALANI

IN REPLY REFER TO:

N1415 (HAVO)

September 14, 1982

Jan Taylor -
Resource Management

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

Dear Mr. Balazs:

On August 12, one of our rangers reported evidence of sea turtle nesting activity at Apua Point approximately 3 miles north of Halape. The ranger reported seeing seven areas where nesting was attempted but apparently only three sites where sand was actually heaped into mounds. The others were left uncovered. Nesting mounds are approximately 100 feet above the high tide mark. They are 10-15 feet apart and heaped 1-1½ feet high.

I'll keep you posted for any additional sightings we might discover.

Thank you for the sea turtle poster.

Sincerely,

Bob

Bob Seibert
Backcountry District Ranger



University of Hawaii at Manoa

Hawaii Institute of Marine Biology
P.O.Box 1346 • Coconut Island • Kaneohe, Hawaii 96744
Cable Address: UNIHAW

November 15, 1982

Mr. Bob Seibert
Backcountry District Ranger
Hawaii Volcanoes National Park
Hawaii 96718

Dear Bob:

Enclosed is the newspaper article about Halape that I promised to send you during our telephone conversation on October 27th. I feel that writer John Perry did a fine job, especially in describing the turtle nesting episode. As I mentioned to you in my post card, John previously telephoned this information to me after getting my name from someone at the Department of Land and Natural Resources.

You asked me to offer ideas for enhancing the survival outlook of sea turtles and their nests in the Park. The following represents some general thoughts, however, keep in mind that I have not personally visited Halape. I will make it a point to do so on my next visit to the Big Island.

1. Sea turtles, both hawksbills and greens, are a component of the Park's fauna that are protected under the Endangered Species Act and Wildlife Rules of the State of Hawaii. Since there is definite concern on your part that nesting turtles and/or eggs might be taken or vandalized, I think it is entirely appropriate to somehow notify Park visitors that they are protected and that fines can, and do, result for violations (\$1200 and \$1400 in two recent cases I know about). Park visitors could be notified by diplomatically-worded signs placed at strategic but secure locations. If camping and hiking (or other) permits are required for Park activities, then one of the conditions of the permit could be abiding by laws protecting sea turtles. You may already have such a condition for fauna and flora, but it would be better to spell out those species that occur within the Park covered under the Endangered Species Act. In considering the above, please keep in mind that I am not suggesting you focus specific attention on the nesting at Halape. Rather the information would simply state that sea turtles and nests are protected throughout the Park's coastline.

2. Cats and mongoose are known predators of hatchling sea turtles, but cats undoubtedly cause more problems due to their nocturnal activity which coincides when hatchlings are most apt to emerge. Cats probably occur more heavily in the Halape area than other coastal Park areas because of frequent camping and the resulting food scraps. I suggest targeting this area for periodic trapping and shooting of cats.

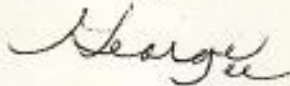
Mr. Bob Seibert
November 15, 1982
Page 2

3. If Park personnel are in the area after a nesting has taken place, they should "erase" any tracks that are still visible in the sand. During our telephone conversation, you asked about possibly leveling out the "mound" at a nest site. After giving it some thought, I think it would be better to fill-in any existing hole or dug-out area with sand taken from an adjacent area (but not from the mound). Leveling the mound might very well reduce the depth of sand over the egg clutch and alter the incubation temperature, which in turn could change the natural sex ratio of the hatchlings.

I am pleased to learn that you are interested in undertaking some special management measures for turtle nesting at Halape. One of these days I anticipate that the Fish and Wildlife Service will formally propose the designation of Critical Habitat for sea turtle nesting beaches in the Hawaiian Islands. Halape will undoubtedly be a candidate, and in my view certainly should be so designated.

I hope that we can still get together for lunch during your next visit to Honolulu.

Sincerely,



GEORGE H. BALAZS
Assistant Marine Biologist

GHB:ec

Encls.

cc: Brian Harry

probably the Spaniards whose galleons for 200 years passed south of the islands once a year from Acapulco, Mexico, to Manila. The islands lay bracketed by the Spanish colonies of Guam on the west and Mexico and California on the east for this period.

It is unknown how many times the Spaniards sighted or landed upon them. However, a galleon's map captured by Lord Anson in 1743 (33 years before Cook) shows the islands that the Spanish named La Mesa and Los Monges in sufficient proximity to Hawaii to stir up a controversy for the past 200 years as to whether these were actually Hawaii. In 1806 James Burney, the British Admiralty's official historian and one of the greatest of all time, (incidentally a lieutenant on the Discovery on the Third Voyage by Cook) rendered the opinion that these islands were Hawaii:

La Mesa and los Monges are supposed to be the islands at present named the Sandwich Islands, but the longitude in which they were found by Captain Cook has been an objection. La Mesa (supposed to be the Island Owhyhee) is laid down in the chart showing the track of the galleon, 100° 30' E from the Emboc. de San Bernardino, which is equal to 224° 15' E of Greenwich. Owhyhee, the body of it, according to modern observations, is in 203¼° longitude E of Greenwich, which is a difference of above 20 degrees, and a larger error than can

hungry populace.

When the two ships came abreast of the area occupied by the Mauna Kea-Beach Hotel, a typical winter kona storm broke, with the result that the stays of the Resolution's main mast were damaged and Capt. Cook had to return to Kealahou to repair the damage. Little did the captain know that the exposure of Kealahou is such that had this storm broken when he was there, his two ships would have certainly been driven ashore and lost.



James Cook

THE DEATH OF Cook then followed as a result of several miscalculations on his part.

The first was his failure to properly assess the attitude of the populace after the British tars had consumed

This view of Capt. Cook's ships Britain's recognized top illustrator first recorded sketch of a man Hawaiians show a variety of size

and ended in 1781. It is estimated that 5,000 sets of these volumes were printed by the Admiralty in several editions. In addition to these summaries, "bootleg" editions were issued and innumerable private abridged editions also appeared.

From that day to this, hundreds of different books about Cook's voyages have appeared, even translations into foreign languages. One of the last to be discovered is a small Portuguese edition which the writer picked up in Lisbon several years ago.

TO PROPERLY orient oneself on Cook, the principal purpose of each voyage must be understood.

His first mission was to proceed to Tahiti to observe the transit of Venus.

The second voyage was to determine the existence or nonexistence of a great continent in the southern hemisphere.

In the third voyage he was ordered to make one last effort to determine the existence or nonexistence of a Northwest Passage to open up a direct trade route from Britain to the Far East.

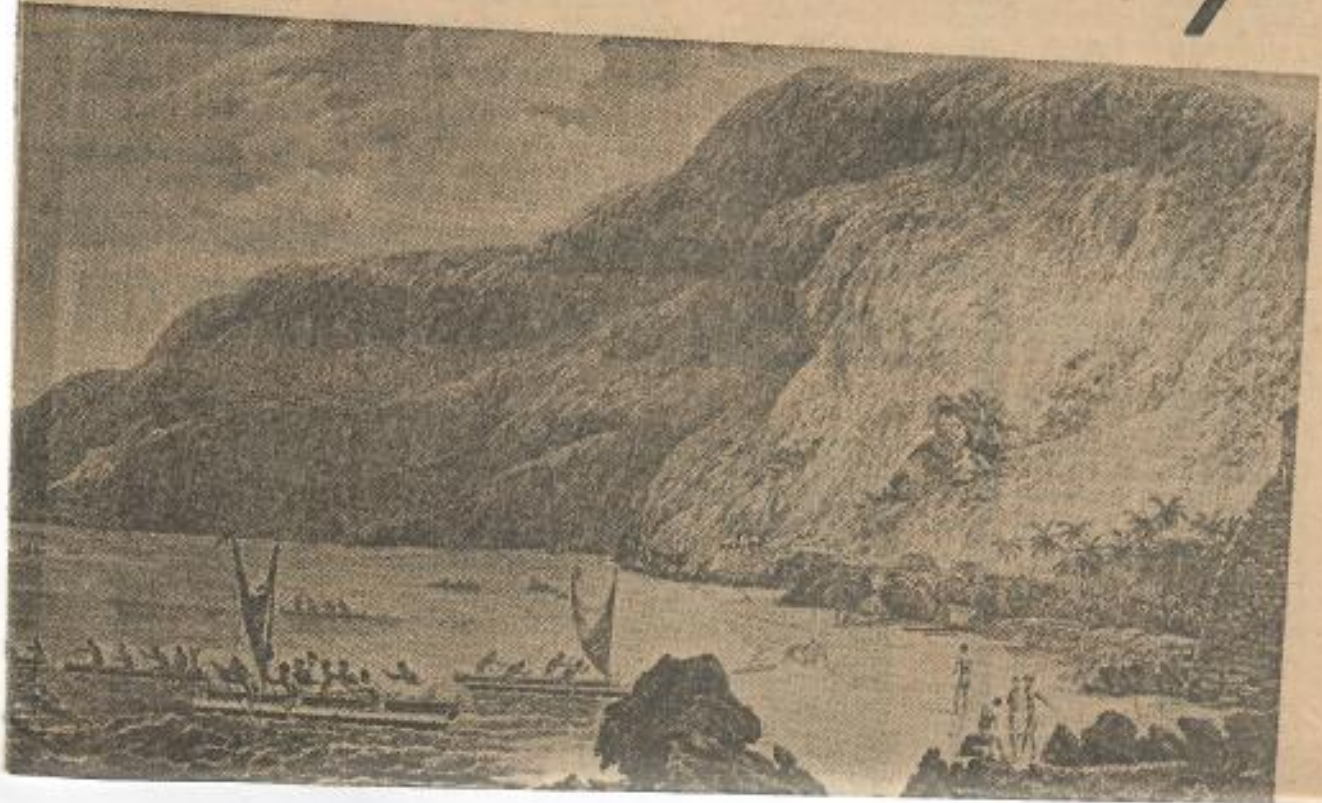
In those three voyages he accurately mapped the bulk of the uncharted portions of the globe.

CONSIDER THAT his circumnavigation of the southern hemisphere placed that enormous section of the earth on the maps for the first

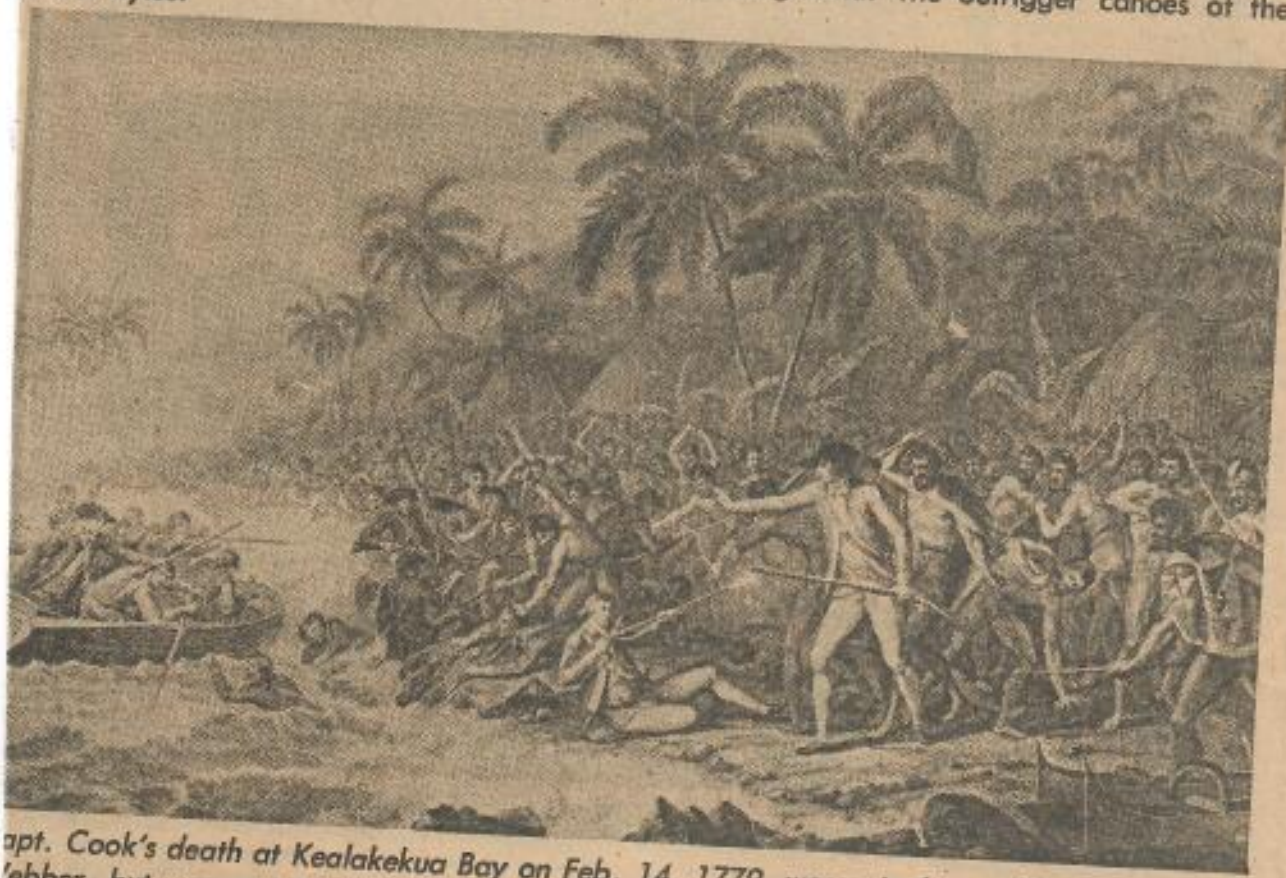
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Monday, October 13, 1975 Honolulu Star-Bulletin A-17

Hawaii's Discovery



in Kealakekua Bay in 1778 or 1779 was sketched on the scene by J. Webber, one of Great
ors, who was assigned to accompany Cook's mission of exploration. So far as is known the
on a surfboard is that of the figure in the left foreground. The outrigger canoes of the
is and styles.



apt. Cook's death at Kealakekua Bay on Feb. 14, 1779, was not witnessed by the artist, J.
Webber, but was recreated from eyewitness descriptions and a first hand knowledge of the
ene. Based on the sketch, says Wendell Carlsmith, the spot where Cook fell can still be
identified today.

be conceived to have been made in so short a run as from the coast of New Spain. But according to Bueno's table, la Mesa is 214° 05' E of Greenwich, which differs from the known longitude of Owhyhee only 10° 35'; and the manuscript chart quoted gives the difference not quite eight degrees. The name *la Mesa* signifying the Table, is descriptive of the high level land of Owhyhee. The latitude accords; *la Mesa* also is laid down to the SE of the other Islands, all which leaves little reason to doubt the identity of *la Mesa* and Owhyhee.

But when the Sandwich Islands became publicly known to the Western world through Cook, the discovery was attributed to him and by modern standards of what constitutes discovery this honor rightfully fell to Cook.

AS COOK proceeded north from Christmas Island, which was discovered on Christmas Day, he came very close to missing the Hawaiian Islands. He had sailed far to the east of Oahu, Maui, and Hawaii, and had sighted none of them. He bumped into Kauai after seeing numerous birds for some days which were tell-tale evidence of the presence of land. After picking up supplies of yams, which abounded on Niihau, and as many pigs as he could and refurnishing his water supply, he sailed north to carry out

so much food.

The second was an earlier miscalculation when he permitted the natives to believe that he was their god, Lono, returning. He paid dearly for accepting this false mantle. Cook groaned when struck just prior to the assassination. Gods in the natives' eyes didn't groan.

The third was his attempt to take and hold the king as a hostage for the return of a cutter stolen from the *Resolution*. The result was that when Cook and his marines went ashore to entice the king aboard, the already angry mob went wild and attacked him.

Almost immediately after his death, calmer heads among the chiefs restored order and Cook's body was given the treatment afforded to the highest of the ali or nobility. As was the custom for chiefs and royalty, the flesh was stripped from the bones. This resulted in the Hawaiians being accused in Britain of cannibalism. The Hawaiians had no press relations to refute this and the unfair verdict persists to this day in Britain.

time and with deadly accuracy at that.

Add to this the vast expanse of the Pacific Ocean, including most of New Zealand and Australia, and the areas to the north and west which were brought to light by Cook.

Before Cook, the entire southern hemisphere was considered to be a great continent heavily populated in the opinion of the armchair "discoverers" in Great Britain who had never been to sea.

Even after Cook sailed through this "continent," the fact of its existence was still insisted upon in England by Alexander Dalrymple, the Scottish geographer, and his followers in a famous last ditch controversy.

More books have been written of and about Cook than any discoverer in history and probably more than all the rest combined. In three voyages he tied together in accurate maps the great unknown parts of the earth. The latest bibliography on Cook supersedes numerous previous ones listing and describing his voyages and is in itself a major volume.

IT IS ONLY relatively recently that the academic world has come to the conclusion that Cook—the last of the great discoverers—was the greatest of all time.

It is astonishing that he should have mapped and oriented a greater portion of the surface of the world than any previous discoverer.

Cook set out on three great voyages of discovery under orders of the Admiralty, all detailed in eight volumes of text and one of maps and prints. These voyages started in 1768

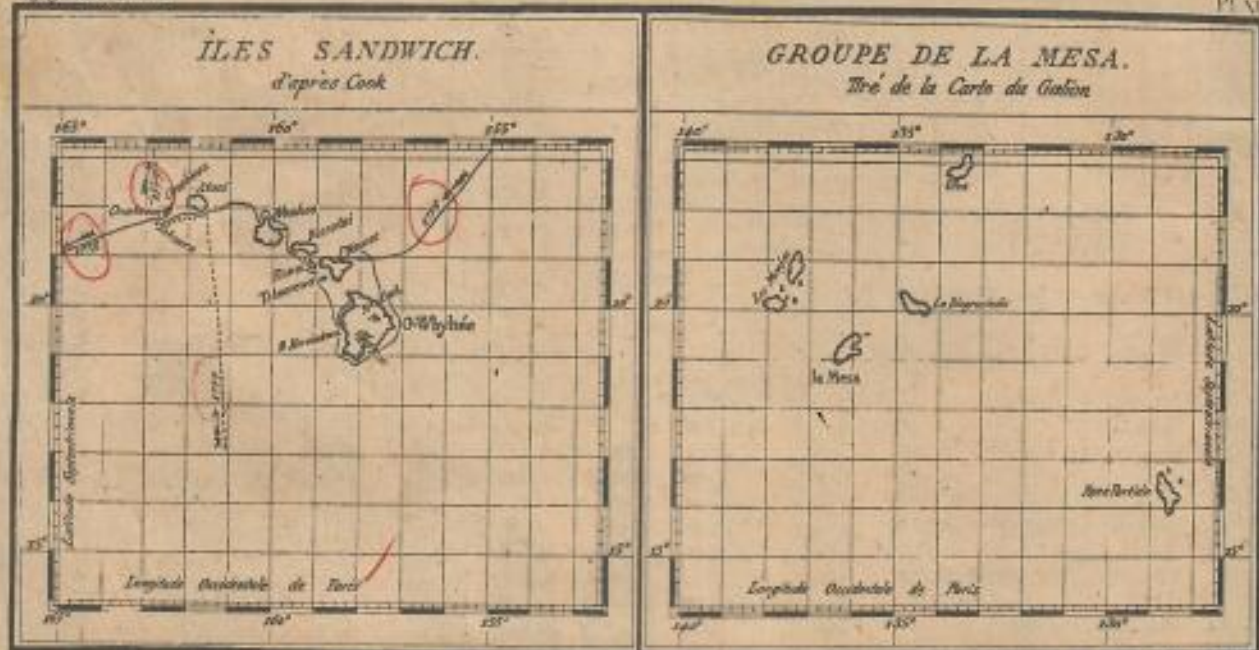
COOK started on his third and last exploration at the beginning of the American Revolution.

As the *Resolution* weighed anchor at Portsmouth at the commencement of the voyage, Cook came across 52 transports in convoy with three British man-of-war which were moving the famous "hired Hessians" to North America to put down the American rebellion.

I have read and re-read the eight volumes of the Admiralty Edition of the three voyages and this is the only instance where Cook expressed

Voyage de Marchand

Pl VI



Capt. Cook's 1778-79 explorations located and charted the Sandwich Islands (Hawaii) as shown at left. Earlier, Spaniards had charted islands at the same latitude but a different longitude, as in the chart at right. Were *la Mesa* and *los Monges* really an early "discovery" of Hawaii, with the longitude poorly measured?

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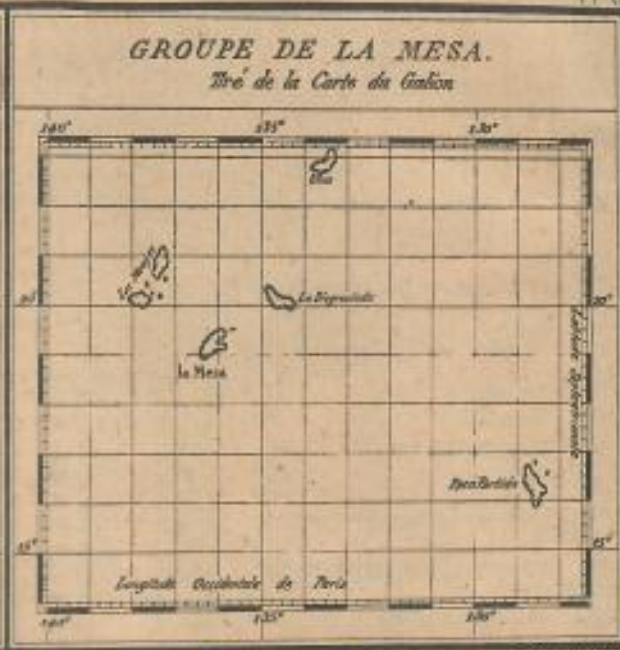
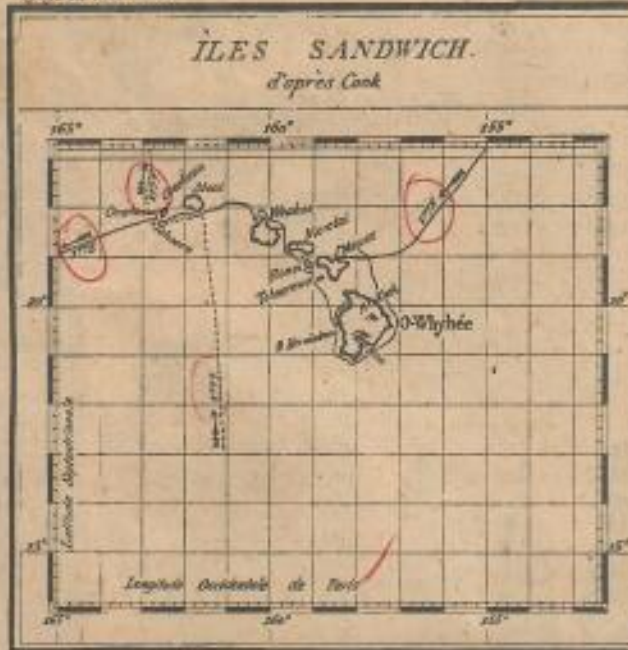
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Compare w/ Cook chart

a political opinion. Otherwise, he struck strictly to the business of chronicling his voyages on a day-by-day basis.

Appearing in the first volume of the Admiralty Edition in his cryptic language is Cook's description of the scene:

It could not but occur to us as a singular and affecting circumstance, that at the very instant of our departure upon a voyage, the object of which was to benefit Europe by making fresh discoveries in North America, there should be the unhappy necessity of employing others of his Majesty's ships, and of conveying numerous bodies of land forces, to secure the obedience of those parts of that continent which have been discovered and settled by our countrymen in the last century. On the 6th, his Majesty's ships Diamond, Ambuscade, and Unicorn, with a fleet of transports, consisting of 52 sail, bound for America, with the last division of Hessian troops, and some horse, were forced into the Sound by a strong North West Wind.

ANOTHER interesting way in which Cook is tied to the American Revolution is revealed in the protection afforded him by Benjamin Franklin, then the American plenipotentiary Minister to France. Franklin, whose principal business was bent on securing French aid to the colonists' revolt, negotiated with the Revolutionaries a protection for Cook at a time when the American war vessels were destroying everything at sea flying the British flag. Franklin's success in this matter is set forth in his letter to the American man-of-war on the high seas:

To all Captains and Commanders of armed Ships sailing by Commission from the Congress of the United States of America now in Alliance with Great Britain.—Gentlemen,

Ship having been fitted from England before the commencement of this War make Discoveries of new Countries in unknown Seas, for the conduct of that great celebrated Navigator Captain Cook; an undertaking very laudable in itself, as it increases of Geography and Knowledge facilitates Communication between distant Nations, in the exchange of useful Products Manufactures and the Extension of Arts, whereby common enjoyments of

human life are multiplied and augmented, and Science of other kinds increased to the benefit of mankind in general. This is therefore most earnestly to recommend to everyone of you that in Case the said Ship, which is now expected to be soon in the European Seas on her return, should happen to fall into your Hands, you would not consider her as an enemy, nor suffer any Plunder to be made of the effects contained in her, nor obstruct her immediate return to England by detaining her or sending her into any other part of Europe or to America, but that you would treat the said Captain Cook and his people with all civility and kindness, affording them as common friends to mankind all the Assistance in your power which they may happen to stand in need of. In so doing you will not only gratify the generosity of your own dispositions, but there is no doubt of your obtaining the approbation of the Congress and your other American Owners.

*I have the honor to be,
Gentlemen,
Your most obedient
humble Servant*

*B. Franklin
Minister Plenipotentiary from the Congress of the United States to the Court of France*

*Given at Passy, near Paris,
this 10 Day of March 1779*

PRIOR TO HIS selection to head the first voyage, Cook had spent some years surveying the St. Lawrence River. Much of this work was performed under the eyes, arrows and rifles of hostile Indians who did not hesitate to harass and make almost impossible the progress of the survey.

However, the task was completed; much of the river is even now navigated with the aid of the Cook charts completed over 200 years ago.

THE greatest scourge of the early explorers was scurvy. Prior to Cook every sea captain suffered severe loss of life of the crew from this scourge. In addition to loss of life as the voyages lengthened out, more and more of the crews were laid low by the disease, now known to be caused by a vitamin C deficiency in diet.

Cook observed the effect of fresh vegetables and fresh fruits in the recovery from scurvy and was the

first of the great navigators to minimize its effects by a rigid enforcement of diet. Cook describes his procedures while opposite Hilo on Windward Hawaii in conjunction with an unsuccessful attempt to get the crew to drink a sugar cane brew:

Few commanders have introduced into their ships more novelties, as useful varieties of food and drink, than I have done. Indeed few commanders have had the same opportunities of trying such experiments, or been driven to the same necessity of trying them. It has, however, been, in a great measure, owing to various little deviations from established practice, that I have been able to preserve my people, generally speaking, from that dreadful distemper, the scurvy, which has perhaps destroyed more of our sailors, in their peaceful voyages, than have fallen by the enemy in military expeditions.

FOR INSTANCE, on one occasion Cook took on several tons of New Zealand spinach while exploring and mapping the coast and required members of the crew to consume a given portion at each meal. Two members of the crew refused to comply. The punishment of 10 lashes was administered and thereafter all members of the crew consumed the prescribed diet.

No wonder that Cook practically eliminated scurvy in this three voyages.

EVEN the ablest voyagers must have some luck to survive and Cook was no exception.

On his second voyage in the area of the East Indies the Discovery separated from the Resolution and ran into a submerged coral head. She began taking water so fast that the fully manned pumps were unable to keep the ship afloat. Two steps were immediately taken.

First, every object that was not necessary for survival was thrown overboard and secondly, sail was stretched under the boat in an attempt to plug the leak. This held sufficient water out to permit the pumps to hold their own.

The Discovery was then beached and turned over on her side for repairs. The first inspection explained why she didn't sink. A large chunk of coral plugged up most of the puncture in her hull.

What luck some people have! Incidentally, within the past several years the exact location of the near disaster was spotted and divers retrieved practically all of the supercargo that was thrown overboard.

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November 7, 1985

F/SWC2:GHB

Mr. Joe Evans
Back-Country Ranger
P. O. Box 52
Hawaii Volcanoes
National Park
Hawaii 96718

Dear Joe,

I appreciated having the opportunity to speak with you by telephone yesterday. Under separate cover, I have already sent some new items about sea turtles that will be of interest. If you would like additional copies of any of this material, I would be pleased to make it available.

The monitoring of hawksbill nesting activity by you and your fellow workers offers the chance for us to learn more about this rare and endangered native species. In the past, there has been considerable concern about the impacts of cat and mongoose predation, as well as hunting and harrassment by people. As I mentioned, now is the time when hatchlings could be emerging from nests. If you find evidence of mortality, please document it as best possible, including photographs if a camera is available. I would also appreciate being able to see a few pictures showing overall views of the area used for nesting. I have not yet personally visited the site, but plan to do so when funding and time permit.

Again, it was good talking to you. I look forward to meeting you in person. If you are ever in Honolulu, please plan to visit me here at my office on Dole Street adjacent to the University of Hawaii Manoa campus.

Sincerely,

George H. Balazs
Zoologist

GHB/11

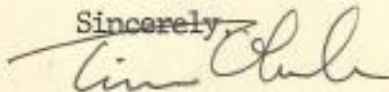
bc: HL, Balazs

January 13, 1986

Dear George,

Thank you for sending me the copies of letters from Hawaii Volcanoes National Park Rangers concerning Hawksbill turtle nesting on the Big Island and HAVO. I have forwarded these letters to the Research Scientist in Charge at Volcanoes - Dr. Charles P. Stone.

Sincerely,

A handwritten signature in cursive script, appearing to read "Tim Chashi".

Tim Chashi
Wildlife Biologist

Department of the Interior
U.S. Fish and Wildlife Service
Hawaiian/Pacific Islands NWR Complex
P.O. Box 50167
Honolulu, Hawaii 96850



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Dr. George Balazs
U.S. National Fisheries Service
P.O. Box 3830
Honolulu, Hawaii 96812



United States Department of the Interior

NATIONAL PARK SERVICE
HAWAII VOLCANOES NATIONAL PARK
HAWAII 96718 - 0052

IN REPLY REFER TO:

January 13, 1986

Dear Mr. Balazs

Enclosed are several slides of the 3 primary beach areas along the coast of the park. I hope they will give you a better idea of what we have been talking about. You may keep the slides.

Now needed On our recent series of patrols from November through the first of January did not reveal any evidence of nesting activity. I would like to discuss the actual nesting period with you again in the near future. I recall the period was between June and August? I will be able to schedule aggressive patrols during that period to hopefully monitor activity.

Our efforts to remove the feral cat population from Halape is going slow. It is believed there are only 3 to 5 cats left.

I plan to be on Oahu in late February. If time allows, I will look you up.

Sincerely,

Joe Evans
Backcountry District Ranger



United States Department of the Interior

FISH AND WILDLIFE SERVICE

300 ALA MOANA BOULEVARD
P. O. BOX 50167
HONOLULU, HAWAII 96850

IN REPLY REFER TO:

ES Room 6307
12/06/82

Dr. George H. Balazs
Assistant Marine Biologist
University of Hawaii at Manoa
Hawaii Institute of Marine Biologist
P.O. Box 1346 Coconut Island
Kaneohe, HI 96744

Dear George:

My apologies for the tardy responses to your two letters. I can only beg the stress of other high priority work, coupled with a response that could wait.

First of all, regarding your request for funding to support additional turtle research/surveys. The \$40,000.00 figure you indicated is as far out of reach as \$5,000.00 or even \$2,000.00. We are absolutely hard-pressed for funds this year. As you may be aware, our Phase 3 avifauna surveys were not funded in our Fiscal Year 1983 Annual Work Plan Advice. We were able to obtain partial restoration of these funds with the understanding that we would have to make up the balance through re-programming from other projects. As it stands now, it is unlikely that we will be able to totally fund the project, and will have to do some additional re-programming to accomplish the survey objectives.

We have been advised by the Manager for Program Development/Federal Assistance, that there are no contingency funds to allocate for status surveys or any other purposes. For all intents and purposes, they do not have a contingency fund this year due to the extensive budget cuts that had to be absorbed. I would have liked to support your proposal because I am confident that you would have produced a product of value and utility to resource managers and others evaluating project impacts on turtles.

Second, your letter to Bob Seibert was "right on". I too will follow-up with a letter to him supporting greater National Park Service efforts in promoting conservation of green and hawksbill turtles, particularly at Halape. The information regarding the turtle nesting observed at Halape is certainly good news. It had been my impression that the earthquake and related subsidence of lands in that area had severely destroyed the turtle nesting beach. Virtually all of the coconut trees along the beach died off after they became partially submerged in the sea. This is really good news.



Save Energy and You Serve America!

I really appreciate the communications that you send my way, and hope that you will continue to do so.

Aloha,

Luise

January 17, 1983

Mr. Brian Harry
National Park Service
300 Ala Moana Blvd
P. O. Box 50165
Honolulu, Hawaii 96850

Dear Mr. Harry:

I am writing to request information on the boundary lines of areas administered by the National Park Service here in Hawaii. Specifically, I would like to know if any of your areas encompass coastal ocean waters. It has recently come to my attention that the Virgin Islands National Park includes at least several hundred acres of adjacent coastal waters (see attached map). Do similar conditions exist for any of Hawaii's National Parks? Also, can you tell me how many other National Parks throughout the United States include marine areas?

Thank you in advance for any information you are able to offer to this inquiry.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk



United States Department of the Interior

NATIONAL PARK SERVICE
PACIFIC AREA OFFICE
300 Ala Moana Blvd., Box 50165
Room 6305
Honolulu, Hawaii 96850

IN REPLY REFER TO:

January 27, 1983

K14 (PAAR)

Mr. George H. Balazs
Assistant Marine Biologist
University of Hawaii at Manoa
Hawaii Institute of Marine Biology
P. O. Box 1346
Kaneohe, Hawaii 96744

Dear Mr. Balazs:

Some of the National Parks in Hawaii include marine areas in their "authorized" boundaries; i.e., the boundaries authorized by the U. S. Congress or contemplated by Park Master Plans. However, these waters are in State of Hawaii ownership. In no case has Hawaii yet relinquished their ownership or adopted management zones comparable to National Parks (as like say, Kealakekua Bay), so such waters do not remain actually in the park. Parks in such circumstance include Kalaupapa, Puuhonua o Honaunau, Puukohola, and Kaloko-Honokohau.

Several parks elsewhere include marine waters. Glacier Bay, Alaska, and Biscayne, Florida have substantial marine waters.

Sincerely,

Bryan Harry
Director, Pacific Area

UNIVERSITY OF HAWAII
Hawaii Institute of Marine Biology
Coconut Island • P. O. Box 1346 • Kaneohe, Hawaii 9

December 8, 1981

Mr. Bob Seibert
District Ranger
Hawaii Volcanoes National Park
Hawaii 96718

Dear Mr. Seibert:

Many thanks for your letter of November 26th answering my inquiry to Don Reeser about sea turtle sightings entered into the Halape log. I appreciated the update you provided, but was sorry to learn that no reports have been made since September of 1978.

From what I have gathered, it would appear that over the years Halape has been regularly used by a few hawksbill turtles for nesting purposes. If you are now regularly visiting this site, it would be worthwhile to make inspections for evidence of nest diggings and emergence of hatchlings. Hawaiian hawksbills are known to nest from August through November, with hatching taking place 50-70 days after the eggs are laid. At least this is the pattern that has existed at Halawa on Molokai, and at several other small beach sites along Kau and Puna. Unfortunately, I have not personally visited Halape, but I do hope to get down there on one of my forthcoming study visits to the Big Island. Any current information that you can pass on to me will be greatly appreciated.

Best regards for the Holidays.

Sincerely,

GEORGE H. BALAZS
Assistant Marine Biologist

GHB:ec

Enclosures

9677311

September 21, 1982

Mr. Bob Seibert
Backcountry District Ranger
Hawaii Volcanoes National Park
Hawaii 96718

Dear Mr. Seibert:

Many thanks for your letter of September 14th describing what was probably the nesting of a hawksbill turtle (Eretmochelys imbricata) in the National Park. Scattered nestings by the species are known from the Puna and Kau Districts, but not many have been well-documented. I would therefore appreciate any further observations you may make at Apuna Point. It is entirely possible that the turtle will reneest (or has already reneested) in the same area.

Mr. Francis Kuailani previously described this event to me by telephone on August 16th. He has promised to send me a map and other details as soon as possible. I spoke with him again this morning by telephone.

During your next visit to Honolulu, I hope that you will call me so we can get together and talk more about sea turtles along the Park coastline.

Sincerely,

GEORGE H. BALAZS
Assistant Marine Biologist

GHB:ec

September 22, 1988 F/SWC2

Mr. Dan Taylor
Resource Management
National Park Service
Hawaii Volcanoes National Park
P. O. Box 52
Hawaii National Park, HI 96718-0052

Dear Dan,

Just a brief note to formally thank you for inviting me to participate in yesterday's aerial assessment of sea turtle nesting habitat along the park's shoreline. It was a pleasure to meet you and Larry Katahira in person and discuss plans for the future monitoring and management of sea turtles within the park. Please continue to count on me to assist and cooperate in whatever way necessary and appropriate.

The experience of using a small helicopter to do surveys of this sort has opened an entirely new perspective to my thoughts on sea turtle related research. In the past, I have tried fixed-wing aircraft for such purposes, but was generally dissatisfied with the results. While the charter costs for a helicopter are much greater, yesterday's successful assessment has absolutely convinced me of the cost-effective advantages.

Under separate cover I am sending Larry a large assortment of sea turtle articles to further his knowledge on these animals. In no time at all I anticipate that he will be a top-notch authority on the subject!

Best regards.

Sincerely,

George H. Balazs
Zoologist

GHB:gr

bcc: GHB ✓
HL

LIBRARY OF
GEORGE H. BALAZS

October 25, 1983

F/SWC2:GHB

TO: William G. Gilmartin, Leader, MMSI

FROM: George H. Balazs

SUBJECT: Recovery of a tagged adult green turtle found dead with gunshot wounds at South Point, Island of Hawaii

A letter received this week reported the finding of an adult green turtle washed ashore at South Point with a "bullet shot" in the head and another in the neck. The letter stated that the turtle was found in July and that two metal tags were present on the flippers. The tags were removed, and sent with the letter. Tag numbers (5485 and 5487) revealed that I had tagged this turtle at Kaualu Bay on the Island of Hawaii on July 23, 1981, at 0400, in a net set within the bay. At that time the turtle was recorded as a small adult female.

It is not uncommon to hear about cases of Hawaiian turtles being shot, or shot at. This activity represents one more reason, in my view, why the French Frigate Shoals breeding colony is showing such slow recovery. Increased public awareness through education, as well as greater enforcement effort, would undoubtedly be of benefit.

bc: Balazs ✓
HL

GHB:iht

LIBRARY OF
GEORGE H. BALAZS

November 30, 1984

F/SWC2:GHB

Dr. and Mrs. William H. Craig
5002 Hawk Nest
San Antonio, TX 78250

Dear Dr. and Mrs. Craig:

Thank you for your letter of November 4, 1984 reporting our tagged turtle No. 7723 found dead at Kinole Cove with its throat cut. This sea turtle, Chelonia mydas, a green turtle, was originally tagged on May 15, 1984, just a short distance away at Punaluu. Two tags were placed on the animal, No. 7723 and No. 7724. The tagging was part of a cooperative study by our Laboratory and University of Hawaii Sea Grant Program. A full description of this research is given in the literature that I mailed to you separately about 2 weeks ago.

It would be helpful and certainly appreciated, if some additional information could be provided on your observation.

1. Did the cut on the throat appear to have been made with a knife? Was it a fresh cut? Approximately how deep?
2. Was the turtle far enough away from the water to exclude the possibility that waves washed it up? A turtle of this small size would almost never come out of the water on its own, at least in that area of the Hawaiian Islands.
3. Did you take photographs of the turtle? If so, copies for our viewing would be appreciated.
4. Was the tag that you saw removed from the turtle, or left on the carcass? Incidentally, both tags were originally placed on the front flippers--No. 7723 on the right, and No. 7724 on the left.

Your report of this incident represents a valuable addition to our research records. Again, thank you very much for taking the time to write. I look forward to hearing from you again at your convenience.

Sincerely,

George H. Balazs
Wildlife Biologist

-a Year Later

Big Island Revamps Disaster Procedures

By Dave Shapiro
Big Island Bureau Chief

HILO—On Nov. 29, 1975, shortly after 3:30 a.m., many Big Islanders were shaken awake by a sharp earthquake generating from Kilauea volcano's south flank.

The earthquake, which measured 5.7 on the Richter scale, was considerably more severe than the frequent tremors to which residents of the volcanic island had become accustomed.

But the "seismometers" in their heads told them it was probably not of sufficient magnitude to cause concern, so most went back to sleep.

A little more than an hour later, at 4:48 a.m., the earth began to tremble again.

This time, it did not end with one quick jolt.

INCREASINGLY violent surges of seismic power shook the entire Is-

It was almost a year ago that Big Islanders woke up to a day that included both earthquakes, tidal waves and volcanic eruptions--three of the island's most feared natural disasters.

The Star-Bulletin's Big Island Bureau Chief was on hand to report on the disasters and tragedies that followed. Two men were killed and 19 others, most of them Boy Scouts, were injured. Now, 12 months

small, continuing sporadically for a day, but it may have been the last at Kilauea for some time.

Scientists at the Hawaiian Volcano Observatory suspect that the earthquake may have shattered Kilauea's internal plumbing so badly that the volcano may now be unable to build up sufficient pressure to erupt.

Perhaps more significant was the subsidence of lands along the Puna and Ka'u coasts.

Volcano observatory studies revealed that some coastal areas sank by as much as 11 feet in the wake of the earthquake.

AT HALAPE, a coconut grove that once lined the campsite was left standing in more than four feet of water.

The area surrounding famous Kaimu Black Sand Beach in lower Puna sank as much as three feet, forcing County officials to evacuate residents for two days until the area stabilized.

The sinking sped up erosion of the black sand beach and left the only road leading to homes in the area swamped with water during high tide.

Significant horizontal deformation, rockslides and ground cracking greatly changed the landscape in the lower backcountry areas of Hawaii Volcanoes National Park.

THE DISASTER led to much criticism of the County's Civil Defense agency, which proved unable to respond quickly to many aspects of the situation.

Civil Defense headquarters was a mass of confusion, with many County employees who reported in to assist sitting around not knowing what to do.

Communications were poor and lit-

agency at the time, said the County was unprepared to deal with such a widespread disaster.

"After all, nothing like this had happened since 1868," he said. "On the tsunami aspect, which is the most dangerous, all of our planning was based on a tsunami generated from somewhere else that took several hours to get here.

"THE PLANS didn't work for a locally generated tsunami that hit within minutes."

Kim said much has been done to improve Civil Defense procedures in the year following the disaster.

"The most important thing we have stressed is local and individual action," he said. "When something hits this fast, we can't get out and tell everybody what to do.

"We have been meeting with groups to instruct them on the things they have to do--actions they can take on their own without waiting for orders from us."

IN ADDITION to education, the County has installed--with the help of the State--a new trigger alarm system that will immediately set off an evacuation alert whenever an earthquake of more than 6.5 magnitude occurs.

"This will probably lead to some false alarms, but it's better to be safe than sorry," Kim said. "The best thing you can do to protect yourself from a local tsunami is to get to higher ground immediately."

The agency has also reviewed and improved its own emergency operating procedures.

Civil Defense headquarters has been equipped with more telephone lines and other means of communications.

COUNTY DEPARTMENTS have

Catastrophe —



SHRINKING BIG ISLAND—In the aftermath of the earthquake and tidal wave, a part of the Big Island coastline near Pundlu'u began to sink—putting trees and even the main belt roadway under water.—Star-Bulletin Photo by Warren R. Roll.





NO INJURIES—This Punalu'u house collapsed and its contents were strewn about when it was hit by the tsunami, but no one was injured. —Star-Bulletin Photo by Dave Shapiro.

Mauna Loa Activity Detected

VOLCANO, Hawaii—Mauna Loa, the Big Island's giant volcano, has shown new signs of life in recent days with a significant increase in seismic activity.

Scientists at the Hawaiian Volcano Observatory are recording up to 300 small earthquakes a day in the mountain, compared to an average of only 20 in earlier months.

The new activity strongly indicates that the 13,680-foot volcano may be building up to a new eruption.

ever, is deep within the volcano and would have to become considerably shallower before an eruption becomes imminent, scientists said.

Mauna Loa previously erupted last July, when a brief outburst in and around Mokuaweo caldera at the summit ended 25 years of inactivity, the longest lull in recorded history.

Based on historic eruptive patterns, observatory scientists have predicted that the summit eruption probably will be followed by a flank eruption within three years.

SCIENTISTS HAVE speculated that any flank outbreak would probably occur on the northeast rift, which faces Hilo.

There has been a gradual buildup of the mountain's inflation since the 1975 outbreak, but until recently there was no accompanying seismic activity to indicate that a new eruption was on the way.

State, County and military planners have developed contingency procedures in the event that a northeast flank eruption sends a lava flow toward Hilo, the Big Island's major population center.

THE NEW SEISMIC activity, how-

to spend \$24.7 million more than it receives this year. The bulk of the State's \$53.4 million for expansion of its

By Doug Boswell
Star-Bulletin Writer

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206 Pages

ay, November 25, 1976



Home

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later, he looks back on that day, with a view to what precautions have been taken by Civil Defense and others to avoid the confusion of Nov. 29, 1975.

land for more than 30 seconds. To residents rocking in their beds it seemed like many minutes.

Their houses creaked and seemed on the verge of collapse. Unexplained "earthquake lights" flashed in the sky like lightning. When the shaking stopped, many districts had lost electrical power and telephone connections.

The magnitude of the quake, also generating from Kilauea's south flank near Kamoamoa, was later measured at 7.2, the greatest Hawaii earthquake in more than a century.

The immediate results were devastating.

AT HALAPE, a small campsite off the southeastern Hawaii Volcanoes National Park, 32 campers were caught between severe rock slides behind them and a rising sea before them.

Within minutes, they were swept inland by tsunamis (tidal waves) averaging more than 30 feet in height.

When it was over, two men were killed and 19 others injured, many of them Boy Scouts.

Waves also ravaged the tiny village of Punalu'u, some 18 miles south of Halape.

SEVEN HOMES were destroyed and more than \$1 million in damage was done to C. Brewer and Co.'s Punalu'u Village Restaurant and the Punalu'u black sand beach.

The picturesque beach was left littered with dead fish and other debris.

At Hilo Bay, wave action sank four fishing boats and destroyed a small pier.

Other parts of Hilo suffered structural damage to homes and significant loss of merchandise in business areas.

Small boats moored in Kona also suffered damage from the earthquake-generated tsunamis.

IN HAWAII VOLCANOES National Park, cracks and rockslides destroyed or damaged numerous roads, trails and other park attractions, many beyond repair.

When the damages were all tabulated, the bill to residents and government agencies came to well over \$4 million.

While the immediate effects of the earthquake were the most dramatic, later events were no less significant.

Less than an hour after the tremor subsided, an eruption apparently triggered by ground movements began in Kilauea's summit caldera.

THE ERUPTION was relatively

the information about the magnitude of the disaster was available in the early hours.

Even more confusion prevailed in the outlying districts, where residents had received little instruction in dealing with such disasters and found themselves helpless.

AT HILO BAY, there were conflicts between police trying to evacuate the shoreline and boat owners trying to save their vessels from wave damage.

Hotel guests did not know whether to go to higher floors or evacuate to higher ground. The result, in some instances, was panic.

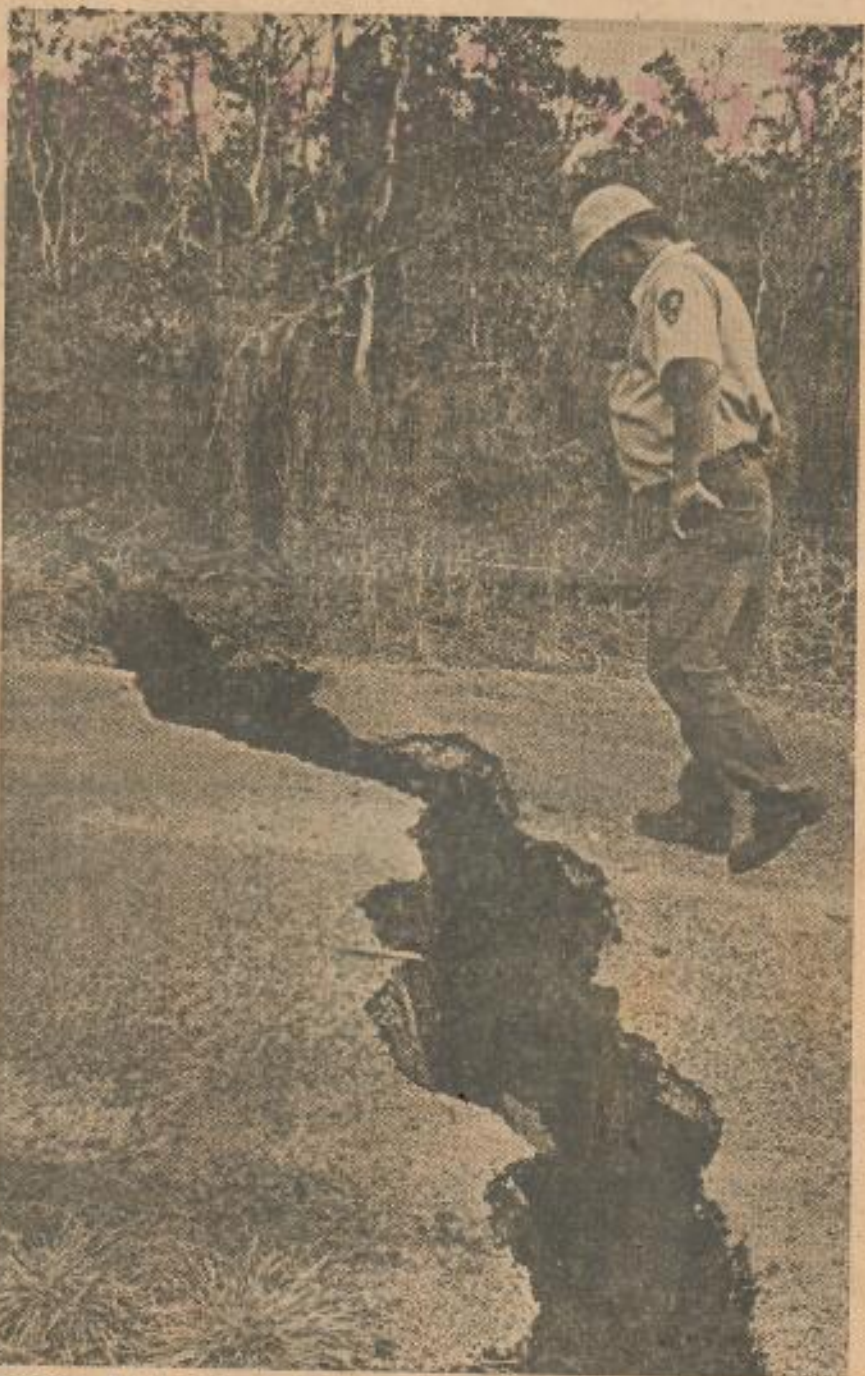
Sunny Kim, a Civil Defense planner who was acting director of the

been organized into emergency response groups trained to perform specific tasks.

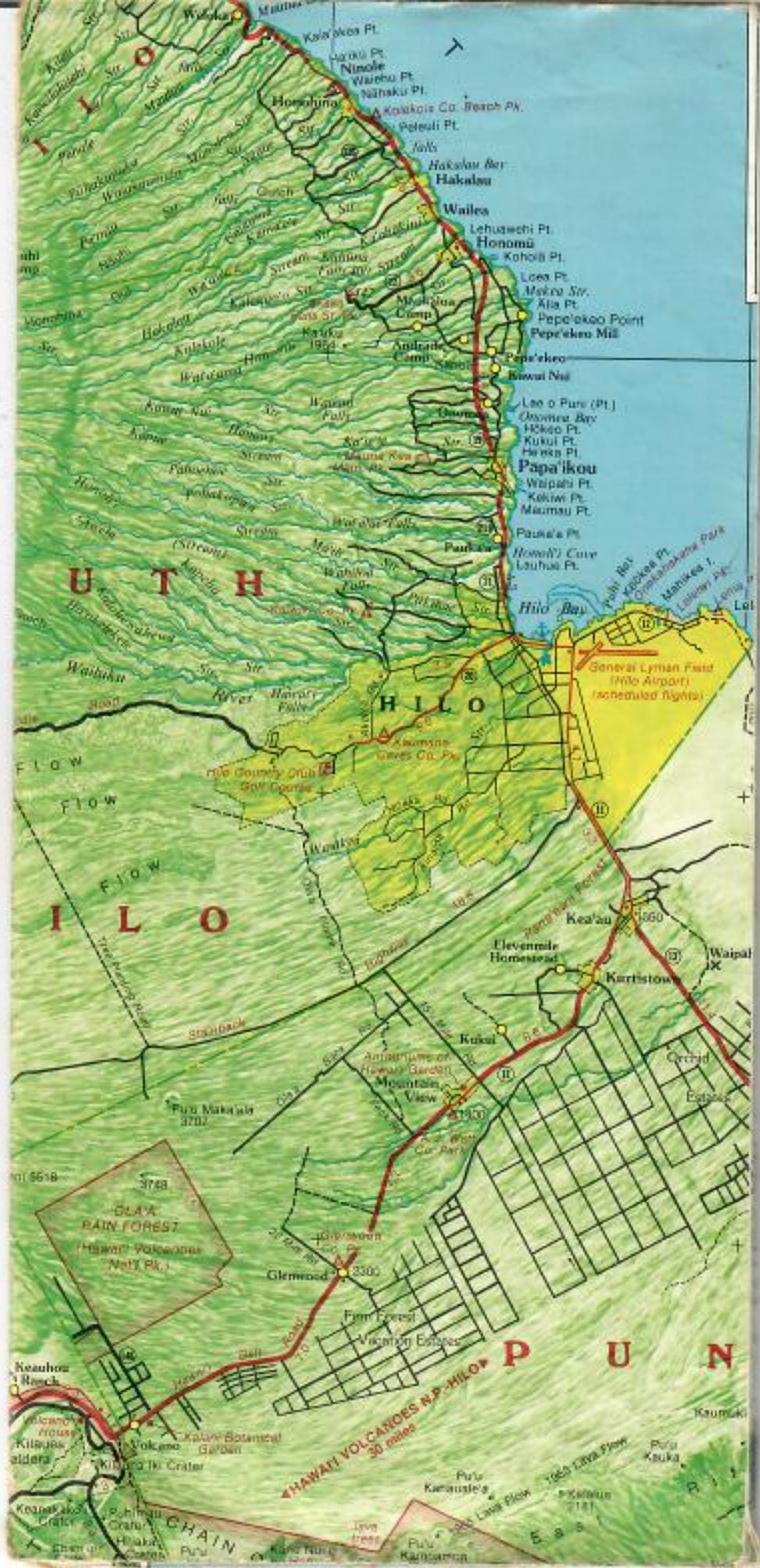
"That will relieve much of the congestion up here when people just show up not knowing what to do," Kim said.

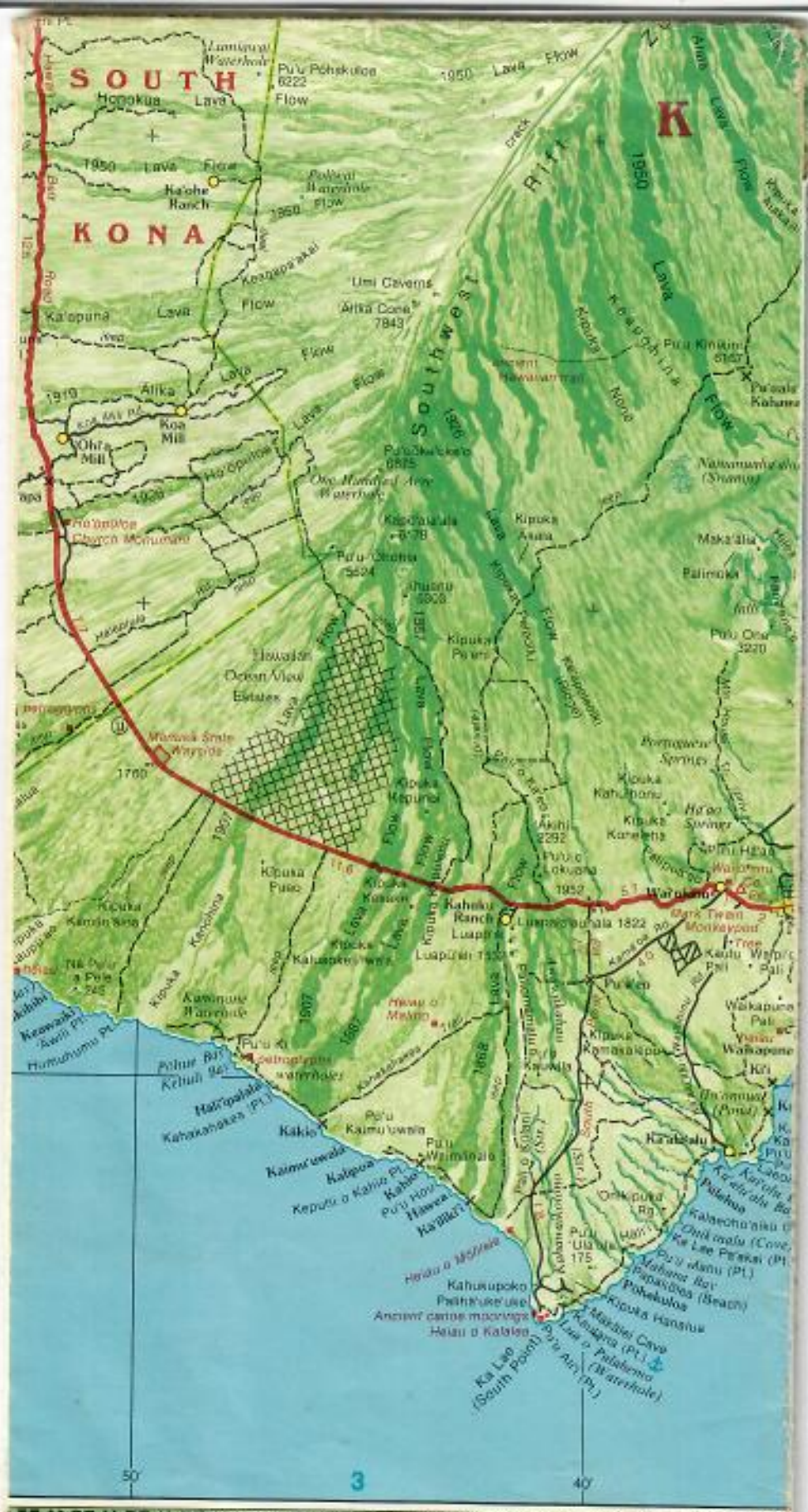
Civil Defense officials have also met with hotel managers and boaters to clarify procedures that will be followed if a similar emergency occurs in the future.

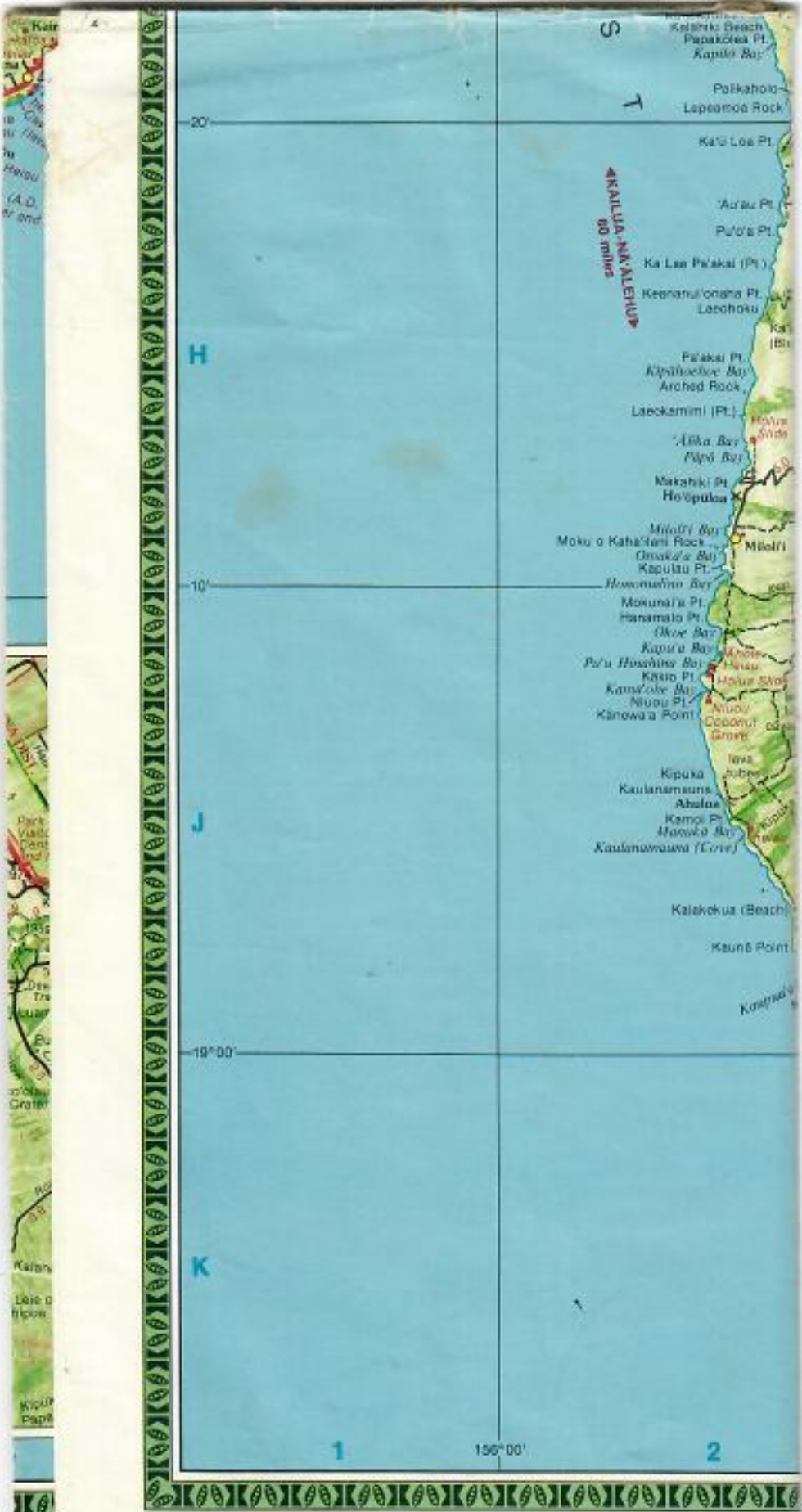
"The main thing that has come out of this is that people are more aware of what they're supposed to do," Kim said. "They used to just sit around and wait for instructions. Now they know what actions to take without being instructed."



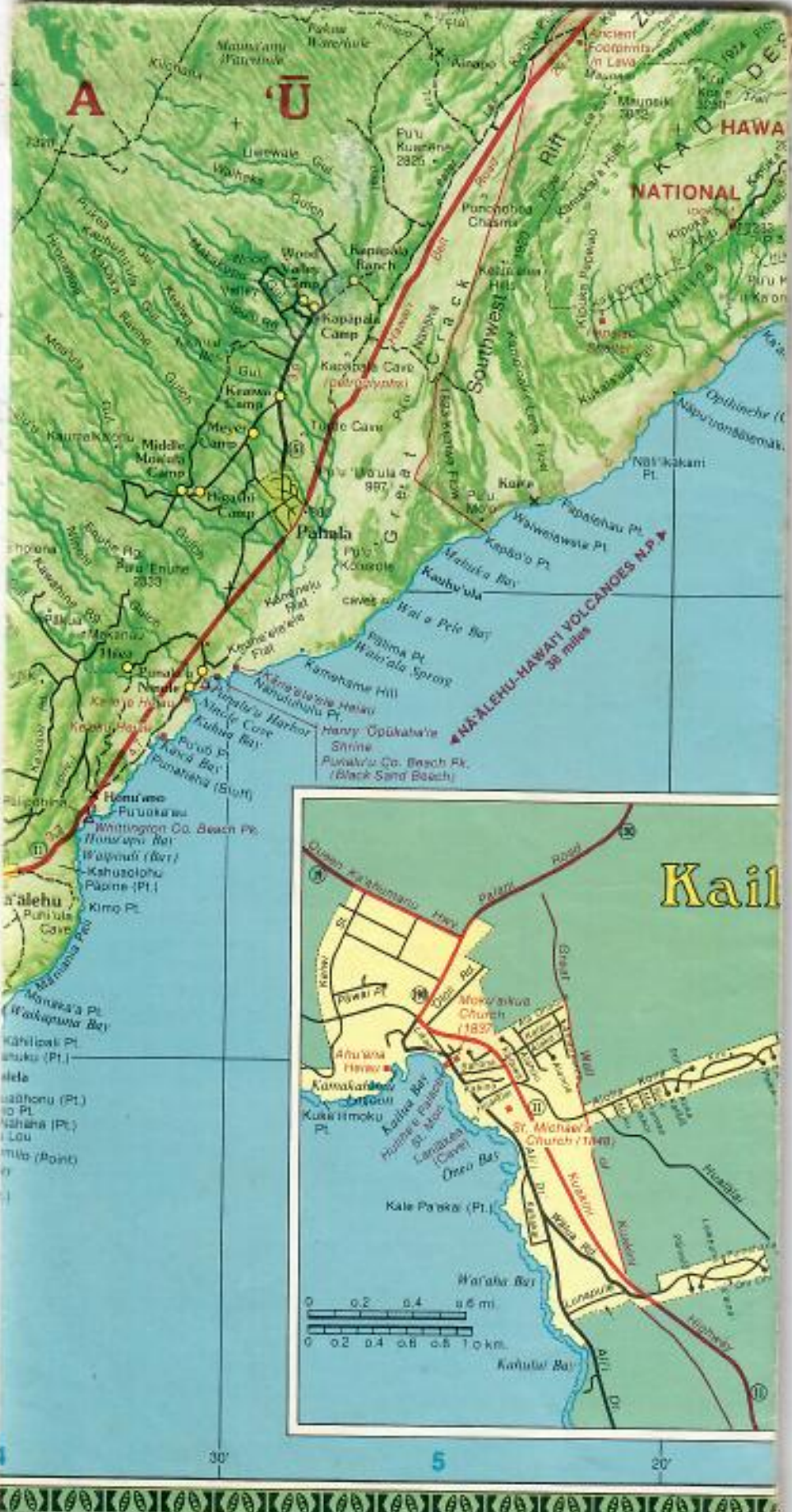
QUAKE DAMAGE—A National Park ranger checks damage to the Chain of Craters Road following the earthquake of Nov. 29, 1975. Miles away, in Hilo, huge plateglass windows were shattered.—Star-Bulletin Photo by Dave Shapiro.



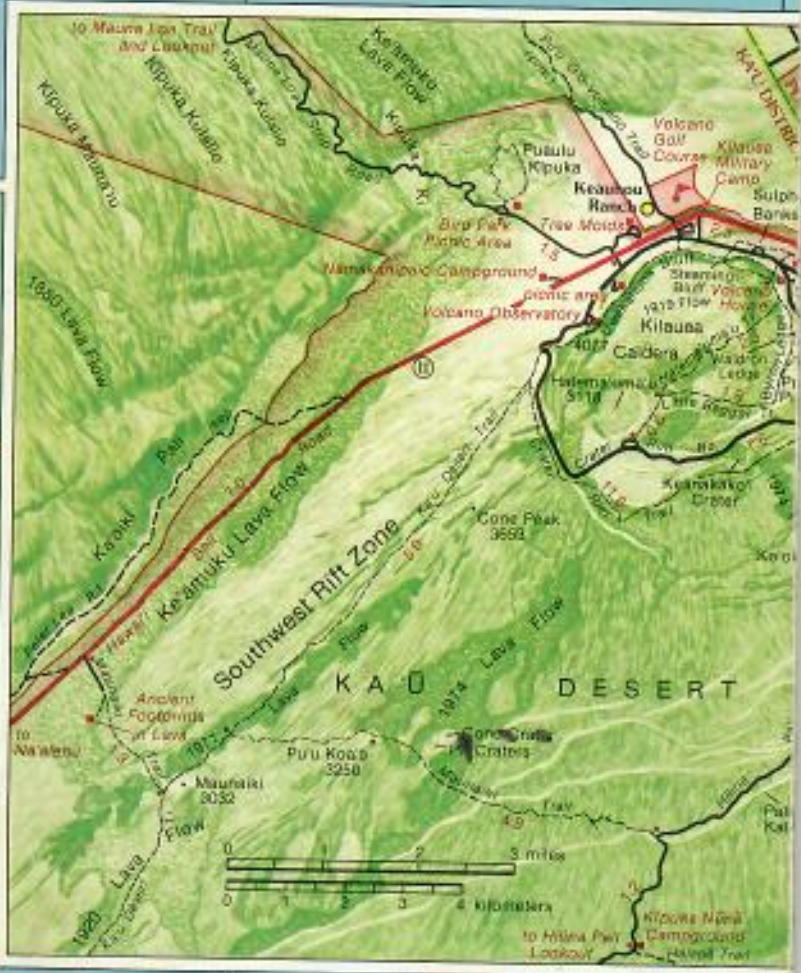
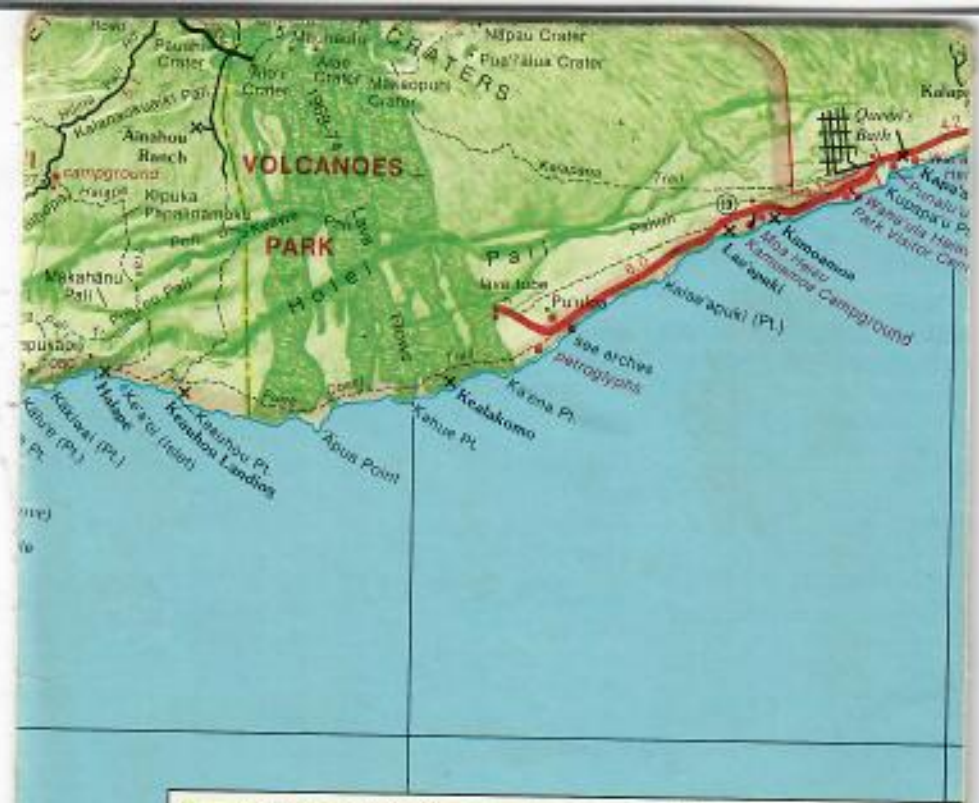




Kaula
 Kaula Beach
 Papakōlea Pt.
 Kapūli Pt.
 Polkaholo
 Lapeamoo Rock
 Ka'ū Loa Pt.
 'Au'au Pt.
 Pu'u'a Pt.
 Ka Loo Pa'akai (Pt.)
 Keenanu'ona Pt.
 Laechoku
 Ka'ū (Bt)
 Palakū Pt.
 Kūhūhūhehe Pt.
 Arched Rock
 Laeckamimi (Pt.)
 'Ālā Bay
 Pāpū Bay
 Makahiki Pt.
 Ho'ōpūlea
 Mōkū o Kaha'āhi Rock
 Mōkū o Kaha'āhi Pt.
 Kapulā Pt.
 Hanamālo Bay
 Mōkūnā'ā Pt.
 Hanamālo Pt.
 Ōkoe Bay
 Kapū'a Bay
 Pū'a Hōhōhō Bay
 Kāki Pt.
 Kāpū'ōke Bay
 Niūū Pt.
 Kānōwā Point
 Niūū
 Ōpōpō Pt.
 Kūpūka
 Kaulanāmauna
 Ahulā
 Kāpū Pt.
 Mānōkū Bay
 Kaulānāwāwā (Cove)
 Kālakēkūa (Beach)
 Kaunā Point
 Kōwānāwā

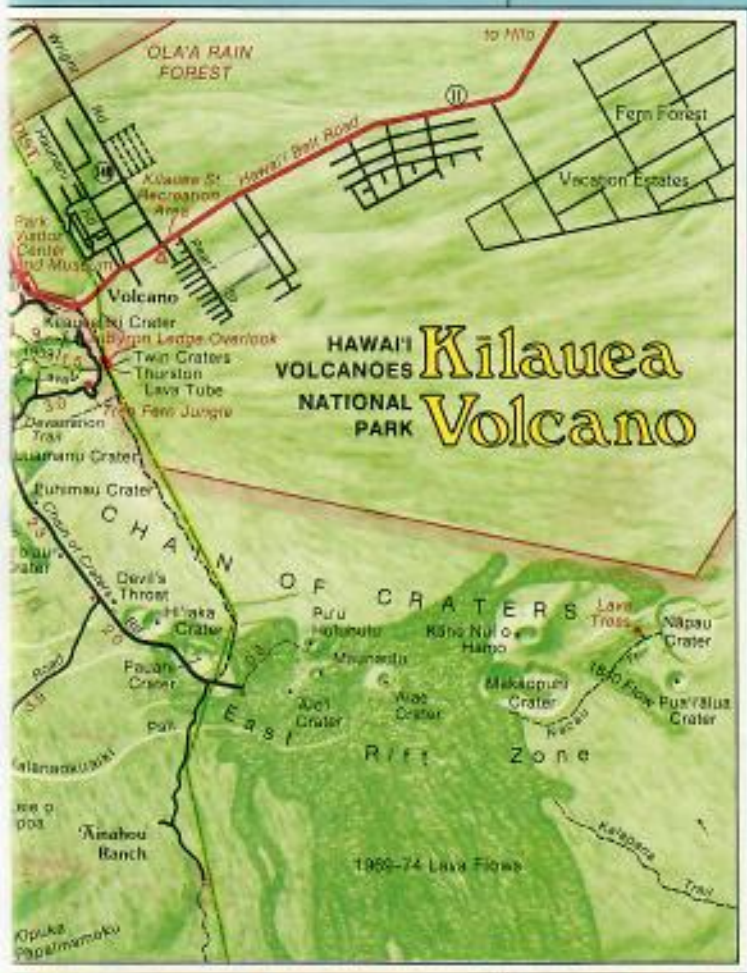
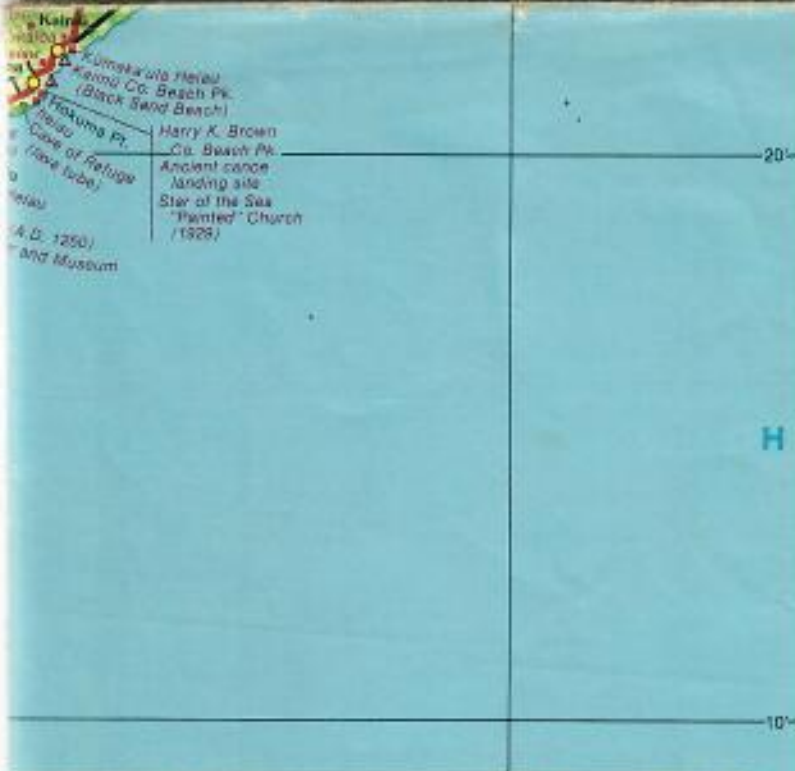


Kilauea Iki National Monument
Kilauea Volcanoes N.P.



6 10' 7 155°00'





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2

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3

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Aleunihā Channel

HAWAII

Department of Geography
published by
The University Press of
Honolulu 96822

NORTH

KOHALA

SOUTH

ELEVATION CONVERSION



Sunday Travel

The Sunday Star-Bulletin & Ad



section **D**

vertiser

Prepared by the staff of The Honolulu Advertiser January 27, 1980



The view from the Volcano

Volcano country revisited

By MARGARET SHELREN
Special to The Advertiser

"One of America's noblest parks," James Michener called it in an exercise of understatement.

To revisit Volcanoes National Park, however, is to challenge one of Hawaii's most eloquent spokesmen. Since, at the risk of overstatement, Pele's domain has to be one of the most extraordinary parks in the world.

Created by an act of Congress in 1916, the Big Island preserve was dedicated five years later in a ceremony which included a chant by one of Pele's priests and a Christian prayer dating from the time Chiefess Kapioani renounced the volcano goddess on Halemaumau's rim.

An even longer history characterizes Volcano House, whose 1846 version evoked this description: "a native-style house with a lauhala mat as the floor and a fern-covered pole framework for a bed."

Expanded to accommodate 40 people by 1860, it entertained 400 visitors annually by 1866. Currently more than twice that number arrive every day.

But when have you lunched in that grand old place, the scene of strange happenings and unexplained sightings?

Where guests have glimpsed the ethereal proportions of a woman float from the well-known Pele portrait, a fire has burned continuously for more than a half a century in the lobby fireplace.

Behind the inn original earthquake-recording devices are buried, although few visitors concern themselves with such data when confronted by the ever-thrilling panorama of Halemaumau.

The country's "newest natural wonder" (detailed in the museum now undergoing major change) is the subject of striking photography in a short movie interpreting seismic phenomena such as fountaining, spatter cones, cinder cones, curtains of fire and lava categories.

As for the ancient mythology a dandy free brochure by O.A. Bushnell explains some of the legendry for tourists.

But opting for a look at the reopened Chain of Craters Road, and lacking time to revisit all the old familiar landmarks, you will—without being reminded—pay your respects to Pele. A handful of ohelo berries tossed into Kilauea Crater is the least amenity.

That ubiquitous berry, glowing on the brink of sooty craters, red as molten rock, comprises but one feature of the distinctive

House on the rim of Kilauea Crater overlooking Halemaumau.

scented white and yellow gingers, while another species lights wooded areas with its plump yellow torches.

A red-orange lily (unidentified for us) runs rampant by the roadside as you cut through tree fern jungles and ohia-lehua groves.

Again "the purple flower"—so-called locally—and a waist-high beauty which rivals the loveliness of apple blossoms delight the eye.

Upon reaching drier regions you'll spot red and white varieties of pukiaue thinning into scrubby foliage and dry grasses until only the ferns—the first to take hold after an eruption—lend the frailest touch of green to a rock-encrusted landscape.

To dip from the summit arena down the rebuilt road toward Kalapana is to sustain the unparalleled impact of total devastation through a welter of craters.

One of these, Puhimau, illustrates how molten rock beneath the surface can drain away causing the unsupported "roof" to collapse. Steaming cracks in this pit crater furnish moisture which results in a riot of ferns springing from the walls.

Continued eruptions channeled seaward through this area ruined the native Naulu forest and erected a new shield volcano.

Now a 180-degree view of lava flooded countryside cascading to sea level chronicles the story of firefalls at Holei and Poliokeawa Palis and the subsequent slow surge to the ocean.

Here you sense the meaning of statistics: 491 million cubic yards of lava belched from Mauna Ulu during a five-year period, the longest run in island history.

Throughout that interval Pele outdid herself in crafting a grab bag of geological oddities that attracts international attention, including tree mold forests, lava falls and black sand beaches.

Consequently, the Chain of Craters Road ranks among the finest scenic drives in the world and is surely one of the most unusual.

Above Holei Pali a former picnic area and campground stands complete with trees and man-made asphalt, the whole enveloped by lava, a reminder of Pele's capricious nature.

To encourage the fire goddess to cross the road rather than use it as her channel to the ocean, engineers sketched a route that intersects and follows the flow for a way.

In order that lava configurations remain untouched as much as that was possible, the contractor permitted no blasting during construction and no equipment could move beyond the highway's boundaries.

A spokesman, enumerating difficulties encountered, mentions that large tractors exca-

Volcanic rock, hauled to Hilo for cutting, came back to be used as curbing for turn-outs, vista points and comfort stations.

Such attention to detail supports an official's statement: "Few roads have been built with greater sensitivity and with as much concern for the environment."

Signs identify the many craters by name, often divulging pertinent information. Others point out hiking trails and distances.

But lacking posted data, the visitor would still learn much about volcanic activity through thoughtful observation of the mind-boggling ruin.

Who needs a description of lava types when—on a sunlit afternoon—a wash of smooth pahoehoe lava four miles wide glistens as if it wears a polished glaze?

Contrastingly, dull and slaglike a-a lava resembles gigantic clinkers. Ruggedly beautiful, each is a product of Pele's whimsy.

But people created the carvings consisting of circles, dots, animals and human figures in the Puuloa petroglyph field some eight miles short of the park's boundary.

The second abundant collection in Hawaii, these rock etchings abound on either side of the road along a coastal trail used by the ancients.

Now weathered on pahoehoe lava, the primitive pictures give rise to considerable speculation on the part of moderns regarding their meaning.

Little more is known about nearby Waha'ula Heiau, aside from the fact that Pa'ao, a kahuna from Tahiti, ordered its construction in the 13th century. Today's ruin is believed to be one of many reconstructions.

The opening of new paths, the well-appointed visitors center, archeological investigations and identification of additional features reward not only the first-time visitor but the repeater, as well.

Beyond the heiau a path follows the shoreline weaving "through yesterdays to a time when the rocks had ears and listened to the words of men" (in the words of the brochure).

The loop trail, passing through an ancient Hawaiian fishing village, is suggested as a place "to rest and reflect upon a world where men and women lived and died for a thousand years before the arrival of European explorers."

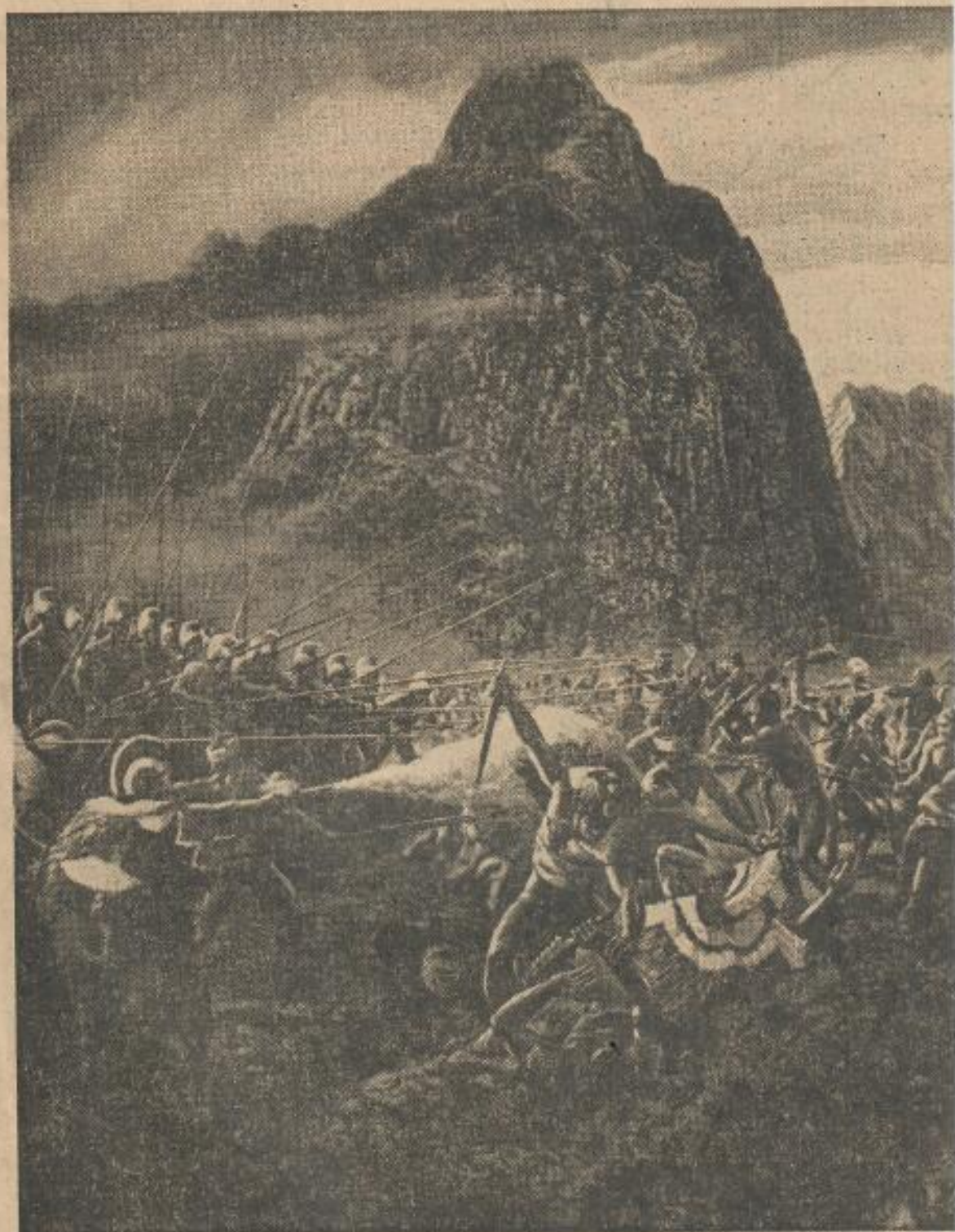
It is an appropriate site, too, to ponder the stunningly varied features of Volcanoes National Park which encompasses this glimpse into an admirable culture.

Noble it is, Mr. Michener, but awesome.

D

Names & Faces	D2
Money	D5-8
Stocks	D6

FOCUS

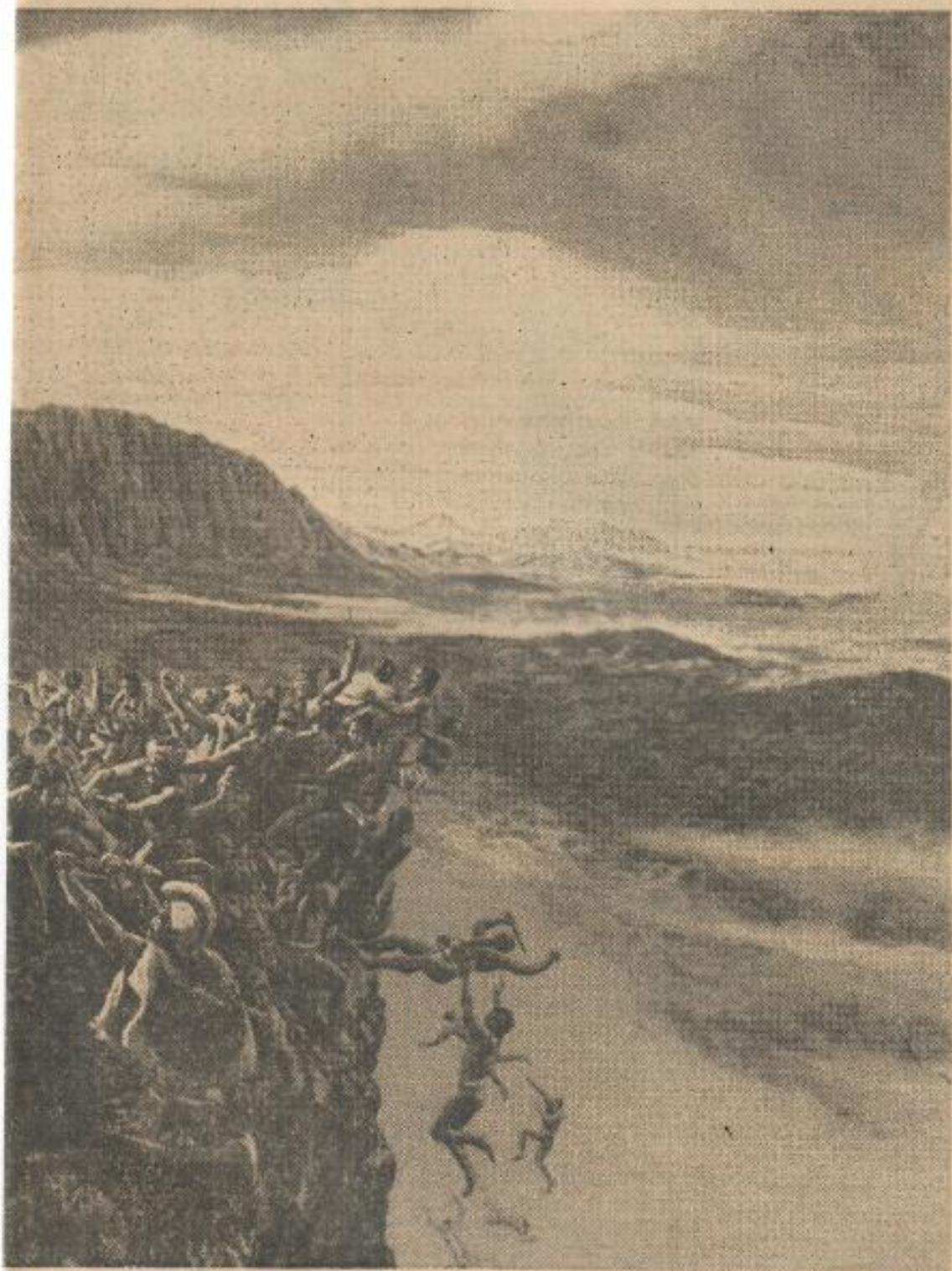


Kane's "Battle of Nuuanu"

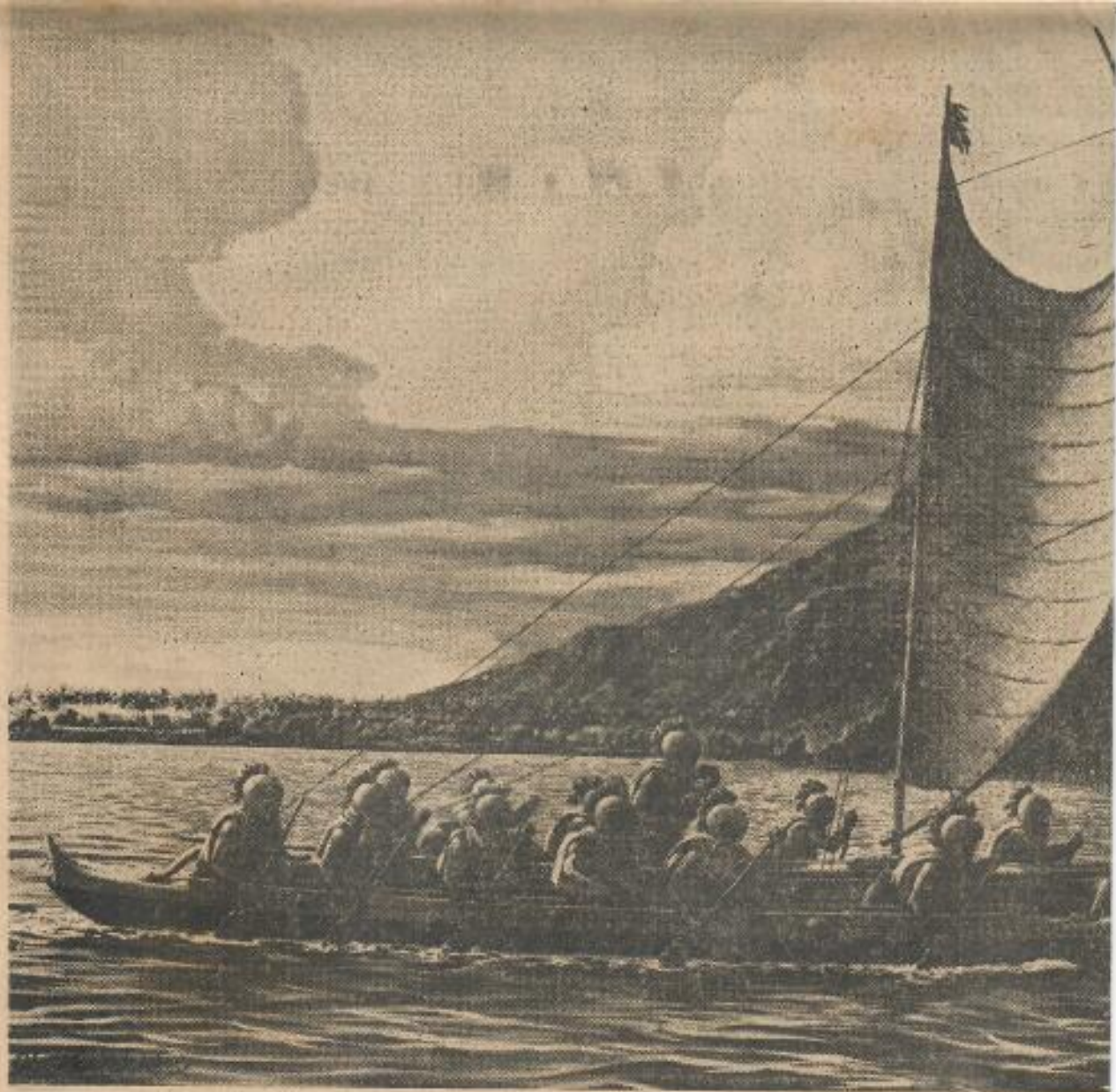
Kane's

S/the arts

The Honolulu Advertiser
Friday, January 21, 1983



Hawaii



Kane's canoe, above, and Webber's:
"He reduced the number of
Hawaiians in each hull from six to
five. This magnified his errors in the
canoe details and altered the
proportions. His canoe and sail are
too small and his paddlers too large."



over two centuries to complete. In 1779, John Webber, an official artist on the third and final voyage of Capt. James Cook, sketched a small double-hulled canoe during his visit to Hawaii.

At the age of 24, Webber was already a very talented artist but he probably got no more than a moment's look as the canoe and its masked paddlers zipped by. His drawing, now in the collection of the Bishop Museum, contains a number of mistakes in the rendering of the canoe.

Herb Kawainui Kane, the foremost artist-historian in the Pacific, has been bothered by Webber's painting for years. As a sailor and canoe-builder himself — he was artistic designer and the construction supervisor for the Hokule'a — Kane felt that Webber's work could be improved. Following months of extensive research he recently finished his own version of the famous image.

"Webber actually did at least two studies of this scene," Kane says. "He subsequently did another in which he reduced the number of Hawaiians in each hull from six to five. This magnified his errors in the canoe details and altered the proportions. His canoe and sail are too small and his paddlers too large."

Kane explains that when Webber returned to London his second watercolor of the masked paddlers was converted to a line engraving and reproduced in the official voyage account. The errors were repeated, then, for England and the entire world to see.

"My objective in creating this new painting," Kane says, "is to show what Webber really saw rather than what he thought he saw. The identity of the paddlers is another problem. If the feathered images are of the war god, these may be warriors or warrior priests heading for Hikiiau heiau during the Makahiki season."

Kane, who has kept a low profile for the past few years, is of Hawaiian, Chinese and Danish descent. He was born and raised in Waipio Valley on the Big Island and later moved to Hilo and Wisconsin with his family.

He joined the U.S. Navy when he was 17 and two years later was attached to the Chinese Nationalist Army in Shanghai as a meteorologist. It was in Shanghai that he began seriously to think of art as a career.

After picking up degrees from the University of Chicago and the Arts Institute of Chicago he



**ronn
ronck**
arts writer

spent 10 years in the Windy City working as an art director in advertising agencies and another 10 as a free-lance book and magazine illustrator.

Around 1967 he grew interested in the early Polynesian voyagers and the canoes that brought them to Hawaii. He returned here in 1972 to do further research while working as a design consultant for C. Brewer & Co. and then Amfac.

That same year 14 oil paintings and 13 architectural drawings were grouped under the title "Canoes of Polynesia" and acquired by the State Foundation on Culture and the Arts. These paintings and the first draft of his book, "Voyage" subsequently inspired the formation of the Polynesian Voyaging Society, the building of the Hokule'a canoe and its journey to Tahiti and back during Hawaii's Bicentennial year, 1976.

"I found it a hell of a story," he says. "Here were two totally disparate cultures and a first-time confrontation that had to lead to tragedy. To the early Hawaiians it must have been the same kind of thing that would happen to us if an alien spaceship were to land in Honolulu."

The story of Captain Cook's visit to Hawaii has led to Kane's present project, a collection of drawings and paintings tentatively called "Kealakekua Bay." The recreation of the John Webber painting, described above, is part of the series which will eventually consist of between 40 and 60 works.

Each Hawaii incident related in Cook's third expedition journals will be illustrated either through color sketches or paintings. Kane recently traveled to Great Britain to do research on British ships, uniforms, gear, weaponry and small boats.

"There were a few exciting discoveries," says Kane. "At the archives of the National Maritime Museum at Greenwich the staff found the original plans for the H.M.S. Discovery. Now I'll be able to reconstruct the ship's appearance."

Kane says that 14 unknown drawings of Hawaii views done by an artist sailing on the ship

See Kane on Page D-4



CAM
261-3574

Kane: What Cook really saw



Detail from Kane's "Petroglyph Maker."

from page D-1

have also just been found in England. He expects photos of the drawings any day now.

"I suppose the major painting in the group," he says, "will be the first accurate visual description of Cook's death. Four artists in the 18th century did so but each is heavily romanticized. They were done with the prevailing cultural attitudes of the time and with no real familiarity with Kealahou Bay itself."

Kane, on the other hand, is approaching his "Death of Cook" with an unbiased view of history and an intimate knowledge of the physical setting. He knows what plants were not growing at the bay during Cook's visit. He knows the precise position of the sun and the state of the tide at the moment of Cook's death. He knows, in fact, the very rock from which Cook fell.

"Today," Kane says, "that rock is 32 inches under water. The land has sunk that much in

the past 200 years. It's also been fragmented, and research by the Kona Historical Society indicates that chunks of the rock have been taken away over the years by foreign souvenir hunters. A French ship reportedly took away about a ton of it.

"I've had to examine what's left of the rock underwater with my snorkel and mask. By now, though, I've got a fairly good mental image of what it looked like out of the water and all in one piece."

In addition to the sketches and paintings themselves, which hopefully will be exhibited as a complete group, there will be a film and possibly a book based upon the artwork. Kane is now working on narratives for both.

Because it will take him an estimated two years of "sustained effort" to finish the Kealahou Bay series, Kane will enter into a partnership with a team of investors who will serve as patrons for the project. He explains that Greg Block of Contemporary Arts Management,

his agent, has worked out a package where investors will provide the funding support to enable him to stay on the project full-time. In return they will have eventual ownership of individual works after the end of their worldwide tour.

"Naturally, I don't want to sell each painting as it comes off my easel," Kane says. "That will hurt the integrity of the project. My main concern is to keep the art together as a collection for the exhibit, the planned film and the book. Everything will work together as whole. I haven't been this excited since the Hokule'a sailed off my drawing board to Tahiti."

KAWENA

Guardian of the Hawaiian Language

By Helen Altonn, Star-Bulletin Writer

SAMUEL H. Elbert vividly recalls the first time he met Mary Kawena Pukui. "She had a flower in her hair and she just captivated me."

That was in 1937, on the top floor of the Bishop Museum. Pukui, affectionately called Kawena, had just joined the staff as a translator. She was working with E.S.C. Handy, an ethnologist, on a book entitled "Polynesian Family System at Ka'u," the Big Island home of her Hawaiian mother's family.

Elbert had abandoned a fledgling newspaper career in New York several years earlier for the warmth and romance of the South Seas and had just arrived in Hawaii via Tahiti, the Marquesas, Samoa and Fiji.

"I had heard about her and wanted to meet her," he said. By then he was fluent in Spanish, French, Marquesan and Samoan languages. "I told her I wanted to study Hawaiian. She was so good. She gave me lessons at her house and her mother was there..."

It might seem an unlikely team—an adventure-some scholar from Des Moines, Iowa, and a *hapa-haole* from the Big Island—but their teacher-pupil relationship was the start of a loving friendship and a "perfect combination" of talents, knowledge and personalities.

Elbert had studied journalism at Columbia University but said he didn't go on with it because it was "too ephemeral," so he went back to the Mainland

for collaborating with *haoles*, with authors or scientists. This hurt her very much, but she kept on working and her door was always open to anyone who wanted information or help, even the naming of children or buildings.

"She said once, 'I've never named a pig but I've named everything else...'" Elbert recalled. "She had a wonderful sense of humor. Doing a dictionary, you can't be prudish."

While Pukui devoted her lifetime to the preservation of her Hawaiian heritage, Elbert said, "She was sort of torn with some of her Hawaiian beliefs because contacts with scholars made her doubt them a little bit..."

Pukui had a poi-and-potatoes type of up-





A 1944 portrait of Mary Pukui by Madge Tennent, above.

'She had a flower in

to study linguistics. He returned to become University of Hawaii professor of Pacific languages and linguistics. ("Since I'm not Hawaiian, they wouldn't use that word," he noted.)

He said Pukui helped him teach Hawaiian and he was "very strict" with his students because he believes the Hawaiian language "should be taught in a scholarly way," similar to any other language.

Pukui was 28 and married when she completed high school in 1923 at the Hawaiian Mission Academy in Honolulu. She had no formal training but was blessed with a natural gift for writing, translating and explaining the Hawaiian language and culture.

Now 87 and confined to a nursing home, she has left a legacy of Hawaiian translations and writings that are still being discovered on little scraps of paper at the Bishop Museum.

"Dr. Handy said she (Pukui) was half *haole* and 100 percent Hawaiian," Elbert laughed, sharing warm memories of his longtime associate during an interview at his Manoa home.

"She had a genius for explaining Hawaiian culture to others, and a genius for explaining the Hawaiian language... She had a tremendous memory. She would go talk to native Hawaiians and remember everything.

"There is no one who can take her place," he added.

Elbert and Pukui wrote "Place Names of Hawaii" with Esther T. Mookini, but their best-known collaborative effort is the "Hawaiian Dictionary," a combined edition of two earlier Hawaiian-English and English-Hawaiian dictionaries that they produced.

They also wrote a pamphlet that they expanded into "The Pocket Hawaiian Dictionary" with Mookini's participation. It is the most popular book ever published by the University of Hawaii Press; almost 84,000 copies have been sold since it was published in 1975.

In 1976, Elbert and Pukui were recognized as "Living Treasures" of Hawaii for their contributions to the understanding of the Hawaiian language. This is just one of many honors bestowed on them, together and individually, for their achievements.

Elbert said he was encouraged to join forces with Pukui on a new Hawaiian dictionary in 1950 because the one in use at the time by Lorrin Andrews was inadequate and "had a lot of errors." She already had started the work and together they greatly expanded the effort.

"We never thought of it as a big seller at all, or paying royalties," Elbert said. "Kawena was very uninterested in money. We never dreamed what it would lead to..."

"Tom Nickerson (then head of the University of Hawaii Press) never thought it would sell at all. But it has sold all over the world. I have a vanity streak, so I look it up," he said, with a big grin. "In Des Moines—so remote a place as that—there are a lot of copies."

Elbert said Pukui "was criticized by some



bringing, reflecting the heritage of both her father, Henry Nathaniel Wiggin of Massachusetts, and her mother, Mary Paahana Keali'i-kanaka-ole of Hanaiumalu on the Big Island.

Pukui was born on the Big Island. Her parents gave her as infant to her maternal grandmother to be raised and instructed in Hawaiian traditions, customs, religion, language and music. Her grandmother died

Turn to Page C-3



captivated me,' Samuel H. Elbert, far left, recalls of his first meeting Pukui. Elbert and Pukui worked together for years to preserve the Hawaiian language.

Pukui, called Tui by her father, lived with her Hawaiian grandmother until she was 6, left, learning Hawaiian traditions, customs, religion, language and music.

Pukui in 1972, bottom left.

Below, a sample of unpublished material by Pukui in the Bishop Museum files.

A New Find

Hana ka iwi a kanaka makua, ho' oho: First get some maturity into the bones before challenging.

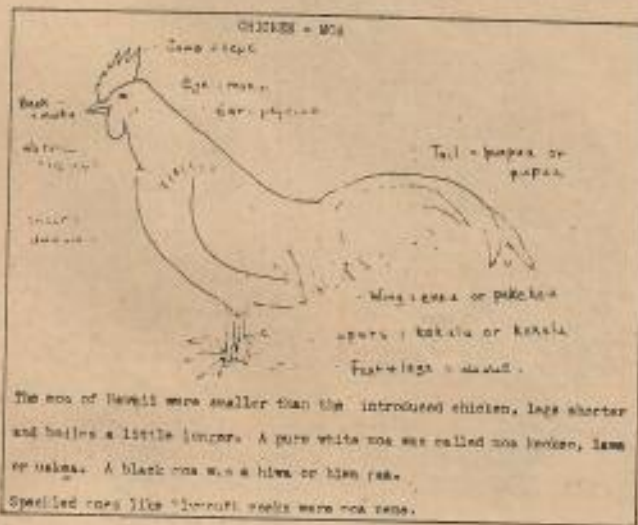
Hapa Haole 'o 'oni'oni: Half white with quivering flesh. What restless, active people these part Caucasians are!

Ho 'okahi no la o ka malihini: A stranger only for a day. After the first day as a guest, one must help with the work.

A rich collection of Hawaiian proverbs collected over the years by Mary Kawena Pukui is being prepared for publication by her former colleagues at the Bishop Museum. It is the last major work of the Hawaiian scholar, and the first to bear her name as the sole author.

"It will be a great boon to translators of the future because lots of things we use are figurative," said Pat Bacon. "We talk about one thing but mean something else."

Bacon said she finished typing the manu-



script four or five years ago. "There are over 3,000 entries. She had been collecting those things for years."

Eleanor Williamson, assistant anthropologist, and Andrew S. Elston, manager of the Bishop Museum Press, have been going through the collection "line by line," for more than a year, Elston said.

Besides "wise sayings," he said the collection includes statements on Hawaiian life and history, material from chants, poetry and legends, and poetic sayings about place names.

"I think it will be a classic, instantly. The important thing is she (Pukui) pulled together for the first time a large number of traditional Hawaiian sayings never recorded or published. We're trying to keep her translations as much as possible. It's (the collection) incredibly rich. It cuts through all human experiences."

Williamson, who worked with Pukui for many years on oral recordings of Hawaiian history and traditions, said, "She used to tell

Kawena...

Continued from C-1

when she was 6 and her mother took over her Hawaiian instruction.

She also attended Big Island schools "to be educated in the manner of the white people" and her father told her stories of the Bible and American folklore.

Another glimpse of Pukui—a "gentle person, not one to raise her voice and yell and shout"—comes from Pat Bacon, who as an infant was adopted by Pukui's parents but raised "like sisters" with Pukui's daughter.

"She loved and enjoyed her Hawaiian background, but she had the greatest respect for her *haole* father for giving her an opportunity to understand the whys and wherefores of Hawaiian culture," Bacon said of Pukui.

She said Pukui spoke nothing but Hawaiian during the first years of her life because her grandmother spoke no English. When she returned to her parents, her father spoke only English to her although he could speak Hawaiian.

"Her father would tell her things about home (Massachusetts). She has never been to the Mainland, but was always interested in Salem and places he talked about...She talked about 'maybe, some day' (going to Massachusetts) but 'some day' never came around."

Pukui began writing and translating Hawaiian folklore, poetry and historical tales when she was 15, blossoming into a prolific author with more than 50 publications bearing her name in collaboration with others.

Elbert has written about 14 books and many articles and the 75-year-old professor emeritus is involved in a number of new projects, including revisions and "a great many additions" to the "Hawaiian Dictionary" stemming from "more reading" of Hawaiian materials.

There wasn't time to make exhaustive studies of Hawaiian books and newspapers for the first Pukui-Elbert dictionary, he said. Much of it flowed from Pukui's memory. "She would think of people saying things that were never published. She would think up things at home—idioms and expressions. None of those things were in the old dictionary."

She would speak with Hawaiians and "notice their phrases," Elbert said. "She would write them and I would rewrite them as concisely as possible. I was very careful to consult her about everything. I read every page to her. She would listen intently and stop me when something was wrong. She was always observant and thinking about it and would pick up many things not known."

"She knew her limitations and concentrated on what she knew," Elbert said. "That is why she was so respected... She would ask her mother a lot. Her mother was an expert *hula* dancer. One of Kawena's specialties was *hula*, and poetry. She could recite it by the hour, but she couldn't chant."

"She kept a diary for years and years," Elbert revealed. "I don't know where it is but she wrote clearly—very easy to read. She would 'scribble' as she said. She had great literary flair."

She also enjoyed writing songs and working with musicians, Bacon said. "She was so well versed. A word may be too long in Hawaiian but she could pick out another word with the same meaning that would fit in with the beat."

Pukui watched the changes affecting Hawaiians through the years, Bacon said. "Sometimes she said 'fine,' and sometimes she said, 'well,' and that was it."



"One of Kawena's specialties was hula, and poetry," Samuel Elbert says of Mary Pukui. "She could recite it by the hour, but she couldn't chant."

In Honor of Mary Pukui

An annual student award of approximately \$2,000 has been established at the University of Hawaii in honor of Mary Kawena Pukui. The award will be offered to graduate students on the Manoa Campus pursuing advanced studies or research which includes work with the Hawaiian language and culture.

"No one now living has contributed more to the enhancement and preservation of the native Hawaiian language and culture..." said Abraham Piianaia, director of the UH Hawaiian Studies Program, who announced the award.

He said Pukui's work, spanning more than half a century, "has been a major force in revitalizing and bringing about a resurgence of interest in many facets of Hawaiian culture, which we sincerely hope to continue."

Piianaia said the "guiding force" behind the award is Samuel H. Elbert. Elbert provided the initial funding and said he will continue to contribute to the award.

"I wanted to do this for Kawena, but I hope other people will contribute," he said, expressing his hope that it will be a perpetual award. He said contributions may be sent to the University of Hawaii Foundation.

Discussing criteria for the award, Piianaia emphasized that "ethnicity, race or gender shall not be disqualifications...but it is desirable that the study or research proposed be a contribution to knowledge."

The award winner will be selected by a committee of three persons.

Graduates may apply for the award by writing to the director of the UH Hawaiian Studies Program. The recipient will be announced during spring commencement exercises.

Proverbs

Continued from C-1

me she was 'playing cards.' She would go through the card files and remember something else and write it out. I found one recently on, of all things, a Matson letter head, and I know she wasn't on a Matson ship."

Pukui was "boundless in her curiosity," Williamson said, and "she would write on every little piece of paper...She had a marvelous humor. It was a delight being with her."

Williamson recalled her early days as a volunteer worker at the museum when Pukui "would come peek in to see what I was doing. Then it became more than peeking in. I was listening to some chants and she would look at how I was writing them out. Then she'd hand me a piece of paper. I had incorrectly joined a Hawaiian word."

"There are Hawaiians who speak Hawaiian fluently but the ability to translate and find the proper English for a Hawaiian thought, that's the key to everything—Kawena's greatness," Williamson said.

Quite a few of the Hawaiian proverbs were used for the "Hawaiian Dictionary," Williamson said, "and Kawena kept adding... She had a 'who, what, where, when' file and this became the proverbs."

The University of Hawaii Culture Committee has funded the time-consuming task of getting the bits of paper and cards into book form, she said. Now a proposal is being prepared to seek funding sources for publication of the collection by the Bishop Museum Press.

The museum has files full of other unpublished material by Pukui, including information on such topics as ancient *heiaus* and Hawaiian natural history, Hawaiian names for parts of animals, biographical material, student compositions and texts of chants and early talks on hula.

The volume of her translations is "mind-boggling," said Cynthia Timberlake, museum librarian. "If we had an angel, we would publish it immediately...It is a great source of native literature. She does it with nuances modern students don't have...She was devoted to the Bishop Museum. Everybody here reveres her."

Marguerite K. Ashford, reference librarian at the museum, noted that Pukui would go back and annotate her work—adding notes such as this one to a story she had written about a chant. "I doubt this story even if I wrote it myself."

And she fearlessly signed all of her work, unlike some authors, Timberlake added.

On all of Pukui's other books, she was a collaborator, translator, co-author or source of material. Even with her collection of proverbs, Elston said, "She would say, 'this isn't my work but the work of the people.'"

He said the book will be edited and designed so it can be picked up for just a few minutes of enjoyment or used for linguistic studies in conjunction with the "Hawaiian Dictionary."

18 MARCH 1980 TUESDAY

At Kona airport I rented a Dollars
U-Drive for \$14.95 per day. Saw
Ed Bilderback ^{here} here for one week
and now returning to Seattle -
Candi Stanley's telephone numbers -
Called Bobby Hinds - Gate Comb. 9928
Food car and proceeded to dirt
turnoff road a short distance past
Kihole lookout. Park car by
stone wall with barbed wire on top.
Transferred gear to Sandy Bay
campsite, taking four trips. 7
Four houses are situated on Bay - plus
concrete remains of an old house.
Water tank, with overflow, also present
at one of the houses.

Snorkelled around fishpond/entrance/
rock edges. No algae growth to speak
of and no turtles seen.

Put 2 sections of net in water
about 6:30 PM - one end tied to
rock at end of entrance peninsula,
other end anchored to bottom.

Turtle caught in end of net at
~ 7:00 PM held overnight at
camp. Swam along net at

~ 10 PM + nothing - but a few places
along the bottom caught on coral.
Checked again with light from shore

374-1295

DUN 1149

KONA

96742

66 KITHLO

11 MARCH 1980

WEDNESDAY 2 AM, and ~ 4:30 AM.

At 5:30 → 6:00 AM twilight
appearing - swam net at ~ 6:30 -
no turtles.

~ 7 AM - observed 3-5 turtles surfacing at
various locations around Bay.

At ~ 8:45^{AM} snorkeled around area
and collected algae - noted flat,
rock shelf in area of inland
ponds outlet (area where Taylor
saw 6 turtles - 7/79 - 8/79). Green
"crisp" alga growing on these rocks.

Also, quantities of red filament.

Sprinkles of rain during the morning.

(1)

KITHO 67

18 MARCH 1980 about 6.30 pm - captured at end of net - set outside channel.

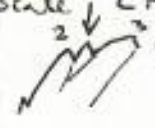
10-
at

3303 LFL
3304 RFL
expanded

S 51.6 cm x 40.6

C 55 x 48.2

extra scale ^{off} L Hind limb ^{limb} between 2-3 phalange, last digit
_(its head)



PL - 39.8
HEAD - 8.0
TAIL - 11.7

WT - 43 lbs

tags are inscribed "Reward - 395-6408"

Released ~ 8 AM - caught ^{*} again
in net about 8:45 AM. - tangled bad,
but tags are o.k.

A few ^{skin} baracles present; small
amount of red skin algae;
Stomach ~~sample~~ sample obtained.
photos w/o calipers

70 KITHOLO

(2) Net captured inside pond shortly after dark -
19 MARCH 1980

3297 S 59.5 x 44.3

3298

C 63.0 x 53.0

PL	47.2	47.2
HEAD	9.0	
TAIL	14.7	

skin barnacles saved in SAMPLE
Skin barnacles - barnacle in PL w/ SAMPLE
ragged edge (trailing) on HIND FLIP

red algae
Stomach sampled 2X - algae retained. WEIGHT = 65 lbs

healing hole (this site) 4th lat. Right
(gunshot injury?)
Photos of swirl patterns on carapace
photos of carapace #25-30

(3)

~ 10 PM hand capture at very end of pond - 19 MARCH 80

3299 RFL (S) 44.3 X 38.2

3300 LFL (C) 46.3 X 44.7

PL	36.9
HEAD	6.6
TAIL	6.9
WEIGHT	24 lbs

No skin barnacles, no red skin algae, but some green on plastron.

White plastron and "scalloped" margins to scapulae.

Deep hole in 3rd lateral right - some blood - silicon lubricate applied

Stomach sampled 3x - algae retained.

photos # 32 - 34 (includes plastron)

72 KITHOLO

(4)

Early morning net capture inside pond - 20 MARCH 1980
Thursday

caught
Apr 20th

3305 PL S - 51.2 x 41.6

3306 LFL

C - 54.8 x 50.3

inscribed
395-6409 -
(only)

PL - 41.4

HEAD - 8.1

TAIL - 11.0

Stomach Sample 2x -

* note - take out 2 amphipods
from rect skin folds

WT - 45 lbs

Photos #35-38

Very small skin barnacles -
green algae on carapace -

Hole ^{deep} (5) healed in 3rd central
right side. (gunshot injury?)

⑤

20 MARCH 1980

net capture
~ 7PM by sluice

3307R

S - 48.1 x 37.2

3308 LFL

C - 51.6 x 46.9

Plastron - 38.2

Head - 7.8

TAIL - 9.5

Photos #1-2



Weight - 34 lbs

A few very small skin barnacles -
 Red algae on skin -
 Stomach 3x - 2 small red filaments - no sample saved
 Several small pieces of coralline on carapace.
 Barnacle removed from plastron - bleeding - saved w/ stomach sample of 3309

76

20 MARCH 1980

⑥

~ 7:30 PM - 8 PM net capture - pond
 - removed shortly after release of ⁶¹³manta

3309

~~3309~~

3310

S - 53.6 x 42.3

C - 56.4 x 48.7

PLASTRON - 42.0

HEAD - 8.5

TAIL - 10.7 46 lbs.

Left Front Flipper

WEIGHT -

PL barnacles saved w/ SAMPLE also 1 other PL barn.
 from # 3308

Knob-scale present on left front
 flipper - same location as 3308
 Stomach sample 3x - sample saved

Red & green algae - very small skin barnacles
 white scum on shell & lots of scratch "swirls"

Photos #4-6

(7) 21 MARCH FRIDAY
 Captured in net by sluice-roted
 at ~ 6 AM

3311 RFL

3312 LFL (S) 62.0 X 47.6

(C) 65.8 X 57.4

HEAD 9.1

PL 47.3

TAIL 15.4

WEIGHT: 66 lbs

Dark shell (+) ^{mud} black in shell

Many skin barnacles - many removed.

Stomach sample 3X (very little obtained)
 Green algae on plaster - small amount
 of red on skin.
 Close-up photos of skin barnacles -
 #8-11

lbs.
 mls

(8) 21 MARCH 1980 Pond net capture, noted
~~53.4~~ 6:30 AM

3313 left

(S)

42.3

X 34.5

3314 Right

(C)

44.6

X 40.0

PLASTRON	34.3
HEAD	7.0
TAIL	9.0

WEIGHT: 23 lbs.

Very sm. skin barnacles, Red alge on skin

- Stommy right side of carapace
- small piece of pink coralline algae

one photograph #14

- no stomach sample

⑨

Captured 21 March 1980 before sunset
in food net: - leaving food (apparently)

3315 RFL

S - ~~42.9~~ X 34.6

3316 LFL

C - 45.1 X 41.2

Plastron - 35.1

HEAD - 7.4

TAIL - 8.2

Weight - 28.16g

Very small skin barnacles -
Small amount of red skin algae

Photo 15 - blood from tag

(10) 21 MARCH 1980

Pond net capture - 9th,
(along with capture on p8³)
Both appear to have been
leaving pond

$$8-9-84 = 63.5 \times 48.3$$

$$49.4 \times$$

3317 RFL S - 37.7

3318 LFL

C - 51.5 x 46.5

Plastron - 39.8

HEAD - 7.7

TAIL - 10.9

$$8-9-84 = 77 \text{ lbs}$$

Green & red algae on plastron - Weight - 37 lbs

Green algae/scum abundant on plastron -

* fishline in rectum - NO - Terrestrial vegetation

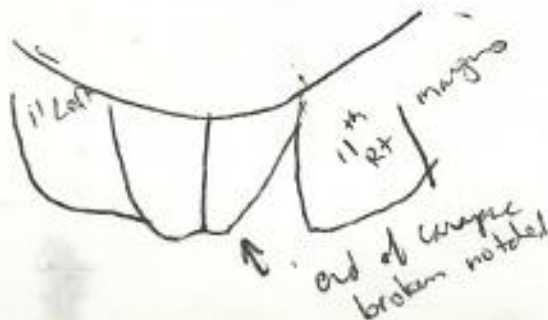
Alga on PL

5th + 6th Marginal LEFT

are semi-fused together

6th abnormally wide

Photos # 16-19



① 21 MARCH 1980

Pond net capture - 49 PM

3319 RFL

S - 47.6 x 37.8

3320 LFL

C - 50.5 x 45.4

Plastron - 38.7

HEAD - 7.7

TAIL - 11.0

Weight - 37 lbs

- Skin barnacles
- red skin algae
photos #20-20

Recaptured ~15 minutes later - swam
into net.

(12)

21 MARCH 1980 ~ 10PM capture in
net by sluice outlet.

3321 LFL S - 52.4 x 41.4
 3322 RFL C - 56.4 49.4

UOODAD RFL
 healed wound
 between 3rd & 4th
 large scale
 OLD TAG?

Plastron - 42.1

HEAD - 8.4

TAIL - 11.5

WEIGHT - 491bs

STOMACH SAMPLE ←
 Skin barnacles saved

"Swirl" scratches on carapace
 Green algae on plastron - also ~~marked~~
 Red algae on skin

Photo #21

18-20 MARCH, 1980

Tagging Summary -

12 captures

Range - 62.0 - 42.3

Straight length

Mean - 50.4 cm

2 recaptures - Tag 3303 within 45 minutes

Tag 3320 " 20 minutes

Tag 3321 - piece missing between scales
of right flipper - possible
recovery from May 1973 expedition.
SL - 52.4

IF this was one of my
KITHOLO tagged turtles, then -

MAXIMUM POSSIBLE GROWTH (82 months) #

52.4 SL - tag 609 37.3 SL⁺ = 15.1 cm = .18%

MINIMUM POSSIBLE GROWTH (82 months)

52.4 SL - tag 615 50.5 SL⁺ = 1.9 cm = .023% ^{cm} mo.

KITHOLO - See "Water Resources" report coauthored
with Steve Dallas 89
(copy on file)

SUMMARY OF TAGGINGS CONDUCTED AT KITHOLO
WITH ED BILBERBACK 14-15 MAY 1973 - 82 months
A60

(transcribed from Book I - East Island Project and Main Island Tagging)

3 cm
h
o
o
s
n.
8 cm
cm
muy

TAG NO.	STRAIGHT CARAPACE LENGTH
14 May 1973 - 0700-0800 h	
602	52.4 cm (Captured by Auna 6/3/76)
603	41.9 -
604	45.7 -
605	66.0 (Captured by Auna 9/11/75)
" " - 1400 h	
607	47.6 -
" 608 1900 h	49.7 -
609	37.3 †
610	42.9 -
611	41.3 -
15 May 1973 0730 h	
612	47.6 -
613	63.2
615	50.5 -
616	64.1 -
617	44.6 -
618	43.5 -

(9/14/74 muy)
Recovered tag "61"
2 miles north of
Kona Village

15 total

Range - 66.0 - 37.3 cm
Mean - 49.2 cm

14 OCT 80
TUESDAY

Depart for Kona at 9:50, Hawaiian
Airlines - 11 pieces of baggage
total.

LAND in Kona ~ 10:45 AM. Full view photo taken
of Kahoolawe with Alan Kam's camera enroute.

Rented a DOLLAR'S Toyota station wagon
for \$14.25 + \$4.00 for insurance; loaded gear &
Drove to Kailua-Kona. Visited for
one-hour with Mr. Hines to obtain
key for new gate. Kiholo Pond and nearly
all adjacent land is state owned. Access
road is through state property.

Before 1800's lava flows, ponds were
far more extensive - "Kiholo" village
existed inland. Flows changed all of this.
Hines used to catch turtles in
channel-winding one to the Mauka side -
only one at that time. Used to catch 4-5,
put them in cave, then let them go.
The sharks ever seen inside pond were
small. Only occasionally was a larger
(6-8') shark in outside Bay.

Alika Cooper not liked by some fishermen
in Kailua-Kona. Cooper seen taking a
turtle at Kiholo caught in a "skyrand" net.
New caretaker at Kiholo is
Raymond Kokegashi & ^{+ twins} woman.
Owners at Kiholo includes H. Porteus,

Oct 14, 80
TUESDAY

Hines (5-6 owners in family), Patches Holt.
According to Hines, a ~3000 yard
set-back exists on coastal state land-
conservation zone?

Need to consider this site for "sea turtle
sanctuary" designation.

Proceeded to Foodland for bread, other supplies.
Ate at McDonald's, got water at Pepco - drove
to Kiholo. Noted that gate-house at
entrance to Kapukelu - Kona Village has
telephone.

Transported all gear to same campsite
used in March. Noted that use of
Helicopter might be a good way to
establish study camps. Gun shots frequently heard.

Laid 3-sections of net out - rope
tied to rock ^{5'} north of palm grove. Nets
extended across pond and anchored on
shallow sand bar at mouth of original
pond entrance. Turtle caught shortly
after net set out.

Rained while setting net, cleared
thereafter - ~1/4 moon - sunset ~ 6 PM.
Lot of stars, very little wind.

Checked about once an hour for the
remainder of night - no more turtles?

Tagging Summary

Captures; SL Range - 39.6 - 66.9 cm

Mean -

23 CAPTURES (22 NET; 1 by HAND)

19 different turtles, of which

8 are recoveries of 7 month duration

As follows:

10.)	42.3	- 44.1	0.257
2.)	42.9	- 46.0	0.442 cm/mo
3.)	47.6	- 49.6	0.285
14.)	49.4	- 53.0	0.514
19.)	51.2	- 53.4	0.314
17.)	51.6	- 53.6	0.286
22.)	59.5	- 61.0	0.214
18.)	62.0	- 63.0	0.142

14-20 OCTOBER 1980

3

cm

duration

	<u>CAPTURES</u>	<u>10/80</u> <u>STRAIGHT</u> <u>LENGTH</u>	<u>3/80</u> <u>STRAIGHT</u> <u>LENGTH</u>	<u>7 mos.</u> <u>cm</u> <u>INCREASE</u>	<u>cm/month</u>
	1. 3476, 77	51.4	—		
	* 2. 3315, 16	46.0	42.9	3.1	0.442
	* 3. 3319, 20	49.6	47.6	2.0	0.285
	4. 3478-80	58.5	—		
	5. 3481-82	44.2	—		
	6. 3485, 86	46.0	—		
	7. 3483, 84	39.6	—		
	8. 3487, 88	57.9	—		
	9. 3489, 90	64.0	—		
	* 10. 3313, 14	44.1	42.3	1.8	0.257
	11. 3478-80	(short-term recapture)			
	12. 3492, 93	66.9	—		
	13. 3494, 95	44.9	—		
	* 14. 3317, 18	53.0	49.4	3.6	0.514
	15. 3496, 97	52.9	—		
	16. 3315, 16	(short-term recapture)			
	* 17. 3303, 04	53.6	51.6	2.0	0.286
	* 18. 3311, 12 (& 3498 new)	63.0	62.0	1.0	0.142
	* 19. 3306, 05	53.4	51.2	2.2	0.314
	20. 3489-91	(short-term recapture)			
	21. 3499-3501	57.8	—		
	* 22. 3297, 98	61.0	59.5 ^{1.5} 1.0		0.214
	23. 3487, 88	(short-term recapture)			

① 14 Oct 1980 Tuesday 7:00 PM capture
KIMOLO POND - NET

TAGS Held overnight - measurements taken AM 10/15

3476 LFL S - 51.4 x 41.2

3477 ^{Through} 2nd scale

C - 54.4 x 48.7

PL - 42.3

HEAD - 7.9

TAIL - 10.7

WT - 42 lbs

stomach sampled - saved - used vacuum flask -

Red ^{& green} alga on plastron -

Skin barnacles present

Right Hind flipper ~ 1/4 missing, but healed -
curled dorsally

healed
hole - indentataion in 2nd Central

Photos 1-2 ASA 64 - EL

② 15 October
TAG Recovery
Wednesday

net capture - Pond ~ 6 PM

S - 46.0 x 37.2
3/21/80 42.9

3316
3315 RFL
telephone # still
here

C - 49.0 x 44

PL - 37.5
HEAD - 7.7
TAIL - 9.5

WT - 36 lbs

STOMACH SAMPLED, SPINE RIDGE SHOWS UP ON CONTRAST
PLATES, RED ALGAE ON TAGS

Medium amount of red & green algae on
plastron - no skin burracles,

10/17 ~ 5:30 Recaptured in net - held overnight

106

③ 15 OCTOBER 1980 net capture - Pond ~ 6:30 PM
TAG RECOVERY Wednesday

3320

S - 49.6 x 39.1
3/21/80 - 47.6

C - 52.9 x 46.5

3319

PL - 40.1 cm
HEAD - 8.0
TAIL - 11.5

Telephone
#5

WT - 41 lbs

Skin barnacles

Pre central divided into two.

Green & red algae on plastron - medium
white scum on portions of carapace

Small pieces missing from hind flippers -
slightly ragged.

④

30PM

15 OCTOBER 1980

Wednesday

Net capture - Pond ~ 6:30PM

8/8/84
69.6
3478 LFL S - 58.5 x 43.0
11.1 cm

3479 R^{2ND} scale

C - 61.6 x 53.7

3480 RFL

lbs

PL - 46.5
HEAD - 9.2
TAIL - 14 cm

skins

100 lbs
WT - 52 lbs

Skin barnacles -

Red alga on skin

Green (and some red) algae on Plastron

4-5 burrowing barnacles removed from PL

Small healed hole through trailing edge

2nd lateral left - healed injury

~ Recaptured 10/17/80 Friday 1:30AM in net.

108⑤

15 OCT 1980
Wednesday

net capture - pond ~ 6:30 PM

348 LFL S - 44.2 x 35.6

348 2RFL C - 47.6 x 41.3

PL - 35.1
HEAD - 7.1
TAIL - 7.5

WT - 27 lbs

RFL  through 1st large scale

- Noted small healed hole through end of LFL
- Stomach sampled
- 2-3 burrowing barnacles from plastron
- Skin barnacled
- Red and green algae on carapace - medium
- Photos # 3-4

110

⑥

16 October 1980 2:00 PM 2nd Net on rocks, center channel
move in to pond

3485PZ (S) 46.0 x 36.6

(C) 48.5 x 44.0

3486 PL - 37.2
L 2nd scale HEAD - 7.8
TAIL: 10.5

WEIGHT: 32 lbs.

- Skin barnacles
- Red & green algae on flastron & skin

scum

Released 5 PM
Swam back into net - intangled and
released again.

UTAS
AS

⑦

16 October 1980 300 PM 2nd Net on rocks, center channel

3483RAL

probably moving out of pond

S - 39.6 x 34.0

3484 LFE through 2nd large scale

C - 42.4 x 39.9

PL - 31.5
 HEAD - 6.6
 TAIL - 7.2

WEIGHT: 21 lbs.

Red & green algae on plastic, &
 skin of ventral flippers & neck.

Scum on parapace
 A few skin barnacles

Photos # 5-6-7

Released 4:30 PM

4 (8)

16 October 1980
Thursday

net capture - Pond - 10:30 AM

3487LFL	8/9/84	68.0		52.2
	S-	57.9	x	44.3

3488R				
Through 2nd scale	C-	62.0	x	52.5

PL - 45.1
 HEAD - 8.6
 TAIL - 12 cm

8/9/84 87 lbs
 WT - 56 lbs

Stomach sampled -
 Skin barnacles
 R & G algae
 LFL slightly short

Burrowing barnacle removed from plastron - destroyed

(22) Recaptured in net 10/19 ~ 11 PM -
 Released ~ 9 AM 10/20 - noted yellowish-white color
 of plastron, compared to orange color of 22

⑨

5

16 OCTOBER 1980
Thursday

~ 11:30 AM

HAND capture - Pond
under ledge on Mauka side
(Shallow) - warm water

3489 LFL

S- 64.0 x 50.0

3490
2nd scale

3491 RFL C- 67.4 x 59.8

PL - 53.4

HEAD - 9.5

TAIL - 13.3

WT - 80 lbs

Stomach sampled red filaments
Skin barnacles
R & G algae on plastron

Photo #8

After release, this turtle may have
gone back into pond - around or
under net.

10/18 Recaptured 4:30 AM - released pond side

6
⑩

17 OCTOBER 1980

FRIDAY

0030

NET CAPTURE - POND

RECAPTURE

3314 RFL

S- 44.1 x 35.8
3/21/80 42.3

3313 LFL

Both tags
expanded
more

C- 47.0 x 42.0

PL- 35.8

HEAD- 7.4

TAIL- 8.2

WT- 29 lbs

- skin barnacles
- Stomach sampled - red fibments
- Small amounts of R & G algae on plastron

Scum on carapace

Tattered hind flippers - healed
photos # 9, 10, 11 (shutter release wouldn't depress)
photos # 12, 13 - tattered hind

⑪ TAGS 3479, 2479, 3480 Recaptured in nets 10/17 1:30 AM

(12)

7

17 OCTOBER

NET CAPTURE - POND

~ 3:30 AM

3492 LFL

S - 66.9

x

49.6

3493 RFL

C - 71.1

x

61.0

PL - 52.7 cm

HEAD - 10.1

TAIL - 14.5

WT - 83 lbs

Stomach sampled -
Small amount R & G algae on plaster
2 ^{discarded} burrowing barnacles removed from plaster
Small patches of pink coralline algae
Eroded, or feed, areas on plaster
photos # 14-15

M

8
⑬

17 OCTOBER 1980
FRIDAY

~ 6:30 AM Pond-net

3494 RFL S-44.9 x 36.8

3495 ~~Left~~
2nd Scale C-47.2 x 42.2

PL - 34.3
HEAD - 7.0
TAIL - 7.8

WEIGHT: 25 lbs

- Small amount of R & G algae on pleastron
- "scalloped" marginals
- ^{scum}
- Skin barnacles
- Looks "thin"
- Stomach sampled - red filaments

(14)

9

17 OCTOBER 1980

~ 6:30 AM Pond-NET

FRIDAY

TAG
RECOVERY

S - 53.0 x 40.6

3/21/80 49.4

3317 RFL


C - 56.2 x 50.0

3318 LFL

Both expanded
more

PL - 42.9
HEAD - 8.0
TAIL - 11.5 cm

WT - ~~46~~ 45

- Stomach sampled red filaments + molluscs(?)
 - Thick patches of red alga on neck
 - Very few (1-2) skin barnacles
 - Dark yellow/orangish areas to plastron
 - Scum on carapace
- Photos #16, 15
#18 shows net & palmgrove
- 

10 (15)

17 October 1980
FRIDAY

net capture - Pond ~6PM

8-8-84	62.3		49.5
3496 LFL S -	52.9	x	41.8

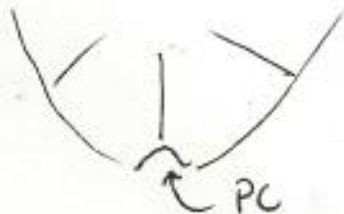
3497R	C -	56.3	x	51.2
<small>2nd SCALE</small>				

PL - 42.8
 HEAD - 8.3
 TAIL - 10.8 cm

8-8-84 - 82 lbs

Wt. - 51 lbs

- Stomach sampled - a few filaments
- Skin barnacles
- Small amounts of R & G algae on plastron



(16)

3315, 3316 Recapture 10/17/80 5:30 PM - released - 10/18/80 outside channel

(17)

11

17 OCTOBER 1980
FRIDAY

6:30 PM
net capture - pond

TAG
RECAPTURE

3303

S - 53.6 x 41.9
3/18/8 - 51.6

3304

C - 57.3 x 50.0

PL - 41.4
HEAD - 8.3
TAIL - 11.5 cm

Wt - 45 lbs

Nothing obtained from stomach sampling

Healed pieces missing from hind (2 front)
flippers - puffed fish? Many other
with similar type injuries.
- Released at beach, swam into net. 8 AM 10/18
Released again outside entrance with (18) 3482
captured ~ 5 AM 10/18

11:30 AM
10/18/80
net

12

(18)

17 October 1980
FRIDAYnet capture - Pond
~ 6:30 PM

TAG CAPTURE

S - 63.0 x 48.4

3311 RFL

3/21/80 - 62.0

3312 LFL C - 66.7 x 58.1

3498R

2nd scale
(new tag)

PL - 48.3

HEAD - 9.5

TAIL - 15.5

- Small stomach sample collected WT. - 70 lbs
- 3 burrowing barnacles destroyed
- Skin barnacles
- R & G on plastron
- Scale-like "knob" (small) above left eye
- Red algae (poly. ? & coralline) on tags of recovers.
- Small holes through end of RFL (2) & RHL
- PC's peeling
- Photos with campsite
- Released 9 AM 10/18 - SWAM into net - Released outside channel

(19)

18 OCTOBER 1980
SATURDAY

NET CAPTURE - Pond
- 12:30 AM

RECAPTURE

3306
LFL

S - 53.4 x 43.6

3305
RFL

3/28/80 - 51.2

C - 57.0 x 52.0

PL - 43.1
HEAD - 8.5
TAIL - 11.7

No stomach sample

Wt. - 51 lbs

Skin barnacles

Red & Green algae on Plastron

Scum on carapace + green algae

Burrowing barnacles - collected

Photos of carapace #25

Photos of stuy girls by turtles, #26-27

Released outside channel ~ 10:30 AM

(20)

3489, 3490, 3491 recaptured ~ 4:30 AM 10/18 -
RELEASED POND SIDE OF NET

17 OCTOBER 1980
FRIDAY (NARRATIVE CONTINUED FROM OTHER
GRAY BOOK - PAGE 109)

HOT AND SUNNY ALL DAY -
CAMPER ARRIVED IN LATE AFTERNOON.
Eagle ray in net during evening -
~~man~~ Cut barb off and
it escaped, back into pond.



18 OCTOBER 1980
SATURDAY

Cloudy, shaded morning.

Photos of two girls interested in turtles:

Lehua Ah Nee

Box 288

Holualoa, HI 96725

Kim Mitchell

P.O. Box 1257

KAILUA-KONA 96740

10

Seawater temperatures recorded by
Kam ~ 10 AM:

Surface, at net, where captures made - 24.5°C

Bottom (-5') " " " " - 26.5°

Outside channel entrance, Makai - Surface - 26.8°C
" " " " - bottom - 27.2°C

Kam saw a school of surgeon fish (Pakani) inside pond at dropoff where net is laid - ~14", 2165 size; Is this what has been nipping flippers of turtles?

18 OCTOBER 1980
SATURDAY

Noted 2-3 gravel or black sand patches to the south. one this side of neat palm grove, one on the other side. Are any of these suitable for hawksbill nesting?

Noted small depression or "campsite" black sand beach - but doubt if it was turtle excavation.

During twilight 5-6 Filipinos came into campsite one with rifle. No flash lights - came in across lava flow planning to lay gill nets. One younger man mentioned seeing Manta in pond.

Seemed familiar with area. Claimed they don't catch turtles. Departed after ~30 minutes.

- NEED letter to me from Aines & all other property owners asking assistance in the establishment of some sort of marine sanctuary for pond. ^{seems} Very important to turtles - gill nets across entrance are not in their best interests.

- Note - lots of silt apparents leaves ponds - nets are covered with silt.

Need List For Future Trips -

- EXTRA PROPANE
- chairs
- eggs - Pancake mix - syrup - Sears burner stove
- Spice Assortment
- teflon or other skillet ^{call}
- helicopter charter - KONA Surf - ^{need to} call travel agent
- Ellis "history" - Journey around Hawaii
- W.C. Handy - native planters of Hawaii
- Peeled chili's
- .22
- Star scope

Hayes Questions Tel. 882-7094

- Presence of red or other algae in shallows of Puako?
- Cooperators living along shoreline? site for netting
- Knowledge of turtles being taken?
- Copy of reports

(21)

19

18 OCTOBER 1980

~ 6:30 PM
Pond - net

3499
RFL

8/30/84
586.13

3500
2nd scale

S - $\frac{57.8}{8.5}$

x

45.4

3501 LFL

C - 61.3 cm

x

53.8 cm

PL - 47.1

HEAD - 8.9

TAIL - 11.5

88 lbs

- Released 10/19 ~ 9 AM - Swam into net -
photos taken at end of roll; one with Kam
#30-38

WT -

59 lbs

- 10-12 dead, healed burrowing barnacles -
done at sites of Rjinkes(?) pores (?)

- Many skin barnacles

- Small amounts of red & green algae PL

LFLimb healed v notch (old tag?)

3rd
scale

4th

- Small healed hole through end of LFL - Photo taken
#28-29

19 OCT 1980

SUNDAY

Drove out about 10:30 AM, cars around gate - people wanting to get in.

Called Lin from Kawaihae. "Drove to Puako - noted 'beach & road reserves' (DLNR) signs."

Returned to Kiholo about 1 PM. Alan had swim around pond recording temperatures.

At the very end of pond, underwater temperature of 28.5°C - surface freshwater is 27.5°C, but trades blowing today caused some mixing of fresh and seawater layers.

20 OCTOBER 1980

MONDAY

Took net out of the water at ~ 8:00 AM -

packed all gear to car - departed Kiholo about 12:15 PM.

Drove to Hines house in Kailua to return key. Cole has relatives that spent honeymoon at Kaalaula Bay - shot turtle for breakfast.

Stopped at Huggos and spoke to lunch chief, night bus boy, lunch waitress.

Bryce Kuddled (?) visitor at HINDS - worked for operation Redwing POZ. owns house at Kanihāhā (Puako region) - now seeing turtles.

(22)

21

19 OCTOBER 1980 ~ 6:15 PM

TAG
RECOVERY

NET CAPTURE - POND

3297 LFL

S - 61.0 * 45.8
3/19/80 59.5

3298 RFL

C - 64.4 * 54.3

PL - 48.8

HEAD - 8.9

TAIL - 16.0

Weight - 62 lbs

- Stomach sampled
- Many skin barnacles - most removed
- One burrowing barnacle removed from PL
- Tattered but healed hind flippers
- R & G algae on plastron
- Left ^{upper} beak injured

Photos by Kam of me and this turtle
in inter tube - note orangish
color to plastron.

4 MARCH 81
WEDNESDAY

Older Man who lives on Maui caught a turtle sleeping in a hole - brought it into his boat - let it go and it swam right back into the hole - (size 122"). A kona web and turtle stay well away from people - learn this quickly.

Herkes and wife - managers of Hotel. Chris Newbert & Candy Stally & attended - probably about 125+ people present. Informed by "Captain Jack" that a Dora Campbell brought in a turtle tangled in a "cargo net" - His boat is the Hanahou - 46'. Jack also mentioned the large turtle caught by Leslie. Following Jerry talk Pate and I discussed the merits of designating the Ponds at Kiholo as Marine Sanctuaries. He could think of no objections - doesn't believe that many people fish there. However, he did recall reading or hearing about Kiholo being designated in some long range master plan as a Park. I should check State Parks Department for clarification.

5 March 81 - Got up ~ 6:30 AM - and ~ 7 AM
Thursday proceeded to Kona airport to pick up Alay Kam with field gear. Returned to Hotel to repack - then checked out and had breakfast at McDonalds. Shopped at Foodland - made telephone calls to Bud Doty and airlines. Got Scuba tank filled - I visited King Kame Hotel - "South Side Trading Post" shop with Pitcairn carved

5 March 81
Wednesday

fans, rings on sale made of
tortoiseshell
turtle. Sales woman in shop, Doris,
Tel 325-7502, showed me photographs of
carvings done by her Marquesan son-in-law
named Rario (Tel 325-5416). Photos
included 2 sea turtles, each with a
different intricate design ⁱⁿ on the carapace.
Calves to order.

Drove to airport where I checked in the
Tropical rental car, and checked out a
Roberts Mazda station wagon for \$12.95 per
day. Telephoned Kelen about my
suitcase - Turn left a only stop flight
in Hailua - go about 1 mile - (Hua alii
(newly paved) ^{TO HLOHA HOUA}) - right on Kakalina - ~~(Hua alii)~~

House is on the left - newly varnished -
they have an orange land cruiser -
Tel. 329-4293 (worked KVR ~ 4 1/2 years)
Telephoned for Byron Ayos ^{at}
Kona Village Resort ^{Build 1984} (KVR) made arrangements
with receptionist to visit there.

Proceeded to KVR - 3 1/2 miles off main
highway. ^{Met} Byron ^(Beach Captain) and associate -
KVR has ^{fresh-} water ~~with~~ spring entering into
the ocean at southern end of cove (across
from beach bar). Some Gelidium growing
intertidally at point - in area where Byron
indicated he seeing turtles close to shore.
Jackie Robinson (friend of Mike Lay)
took us out in Raddon glass-bottom
boat - mostly shallow with lots of cracks
~30'

5 MARCH 81
Thursday

and ledges. She sees most turtles on the surface. Very difficult to approach close. Noted red buoy where Jackie (and girl named Bambi) will take guests on night dive. Bambi sees turtle sleeping off northern point on night dives.

Discussed possibility of staying at KVR to night dive and stay turtles, and to present natural history talks to guests.

Need to write letter to FRED DUERR

Byron mentioned that ^{Elmer} Auna was a caretaker at Kiholo. ^{General Manager}
NO knowledge of "MURTY"

Departed K.V.R. about 1:30 PM - to Kiholo. Transported all gear to regular campsite - several people (tourists) present - but departed across lava flow. Young couple sampling farther back in pond area.

Note - Pete Hendricks mentioned occurrence of "goat round-up" during the late 1940's - possibly explaining the large number of bones and horns found by Alan during Oct 1980 trip to Kiholo.

NET IN:

5:30 PM

Laid 3 sections of net across pond - far end tied to rock, lined up with approximately 4th coconut tree.

5 MARCH 81 First capture made at 6:55 PM - almost
 THURSDAY completely dark. Second capture at 7:30 PM.
 TOOK 2-hour shifts starting at
 10 PM - - till 6:30 AM. No other
 captures.

30-30 shell casing found in sand (not recent);

6 MARCH 81 Worked up turtles during the morning
 FRIDAY (pages 45 & 47) and released them into
 the bay by walking across the gravel
 island. Two men surf casting (for blue)
 and throwing netting indicated that they
 saw a large turtle seaward off the
 point (size determined by size of head seen).
 Also it was stated that about 5 years
 ago a "gardner" drown in pond and
 was never found; belongings were found on
 shoreline rocks.

At about 10:30 AM I put on Saubageas
 and Alan guided me from invertebrate
 at surface (with attached line) back and forth
 across the pond. Greatest depth found was
 ~12 feet (low tide). Bottom consists of
 silty-mud (muck) and lava rock flow
 projecting out. Rocks closer to
 surface in center host algal growth,
 (red) sample collected, but covered
 with thin layer of silt. This shows
 that there is a desirable food in the
 pond for green turtles.

① RECAPTURE

Thursday

5 MARCH
81

6:55 PM - Pond net capture - splashed a lot when caught in net.

3303LFC

inscribed:

"Reward

3304RA

tel. 395-6409"

S - 54.7 x 42.7

C - 58.7 x 50.6

PLASTRON - 42.1 cm

HEAD - 8.4 cm

TAIL - 13 cm

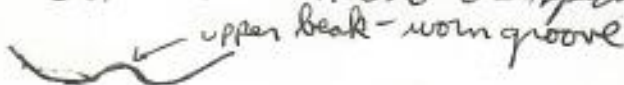
Photos - #1, 2

Weight - 48 lbs

- Small food sample obtained from stomach - small pieces.

Tags have a small amount of red (or green) algae growing in etched "reward" and stamped numbers.

Hinds - and to a lesser extent fronts, have small "bitten" areas - as photoed during Oct 1980 Kiholo expedition.



Scratch marks, anterior to posterior, all over carapace - (sleeping under ledges?)
(Scute injury only)

Healed spot on second central scute.
Very small amount of red algae on skin, green on carapace; a few skin barnacles.

②

47

5 MARCH 1981
Thursday

7:30 PM

net-pond

Net floats down - head never seen at the surface
MOTIONLESS with approached in the water, would have drawn
if left in NET?

S - 42.4 cm x 33.8

C - 45.0 cm x 41.1

3526 LFL

PLASTRON - 33.5 cm

3527 RFL

HEAD - 6.8

TAIL - 8.0 WEIGHT - 24 lbs.

Many small skin barnacles -

Right flap has produced blood-bleeding
Heavy scum ^{algae} on surface

Recent injury - piece missing from upper beak.
Red juice from nares - mouth -
Stomach pumping rot carried out.

Photo - #3.

③ RECAPTURE 3319 RFL

49

6 MARCH 81
FRIDAY

Pond net - ~ 3:45 PM

S - 50.6 * 39.8

3319 RFL

3320 LFL

"Tel. 395-6409" inscribed

} C - 54 cm * 47.5 cm

PLASTRON - 41.0 cm

HEAD - 7.9

TAIL - 11.2 WEIGHT 46 lbs

- Polysiphonia (red alga) on dorsal neck
- Carapace slightly slimy with algae
- Several healed pieces out of hinds
- Green alga on each side plastron
- Small numbers of skin barnacles
- Eroded notch in seam between 10-11th marginals on each side
- Photos of stomach sampling & algae

6 MARCH 81
FRIDAY

The layer of fresh water at the surface only seemed to extend down about 3 feet. Just inside the net the temperature was 24.5°C . At about the half-way distance the temperature at the bottom was 26°C . The consistently deepest areas ^{SURFACE - 23.3°C} were at the very inward end of the pond - regularly 10-12 feet. In this area I grabbed a bottom sample that seemed to consist mostly of shells (interspersed with mud) - sample retained possibly for Allison Kay or Lisa Gouws. Also in this area I pushed the powerhead into the mud full length extending to my forearm. Tip may have penetrated between layers lava rock. While surveying the bottoms back and forth I continually probed ahead and to each side of my path to scare up or encounter turtles (or rays). No contact was made, as evidenced by than not seeing turtles at the surface while I was underwater. At about the half way point, a turtle was seen at the surface while both of us were at the surface over shallower rock area. Several breaths were taken - when swam to get closer it could not

6 MARCH 81

FRIDAY

be found.

Snagged gill net (2 1/2" mesh) found on bottom.
Portions pulled up and covered with rocks.

→ NEED -

Graph size increase of Kihob recoveries
by time; also indicate number of capture
and recoveries - post on office wall.

→ Xerox 1/2-page handout describing turtle
catching and tagging;

→ Implications of recruitment due to
growth rates in a green turtle
population" (Journal article title)

One capture made at 3:45 AM (Page 49 -)

Two turtle captures made (during twilight,
and after dark) - 2 hour shifts again
throughout the night - no other turtles.

NOTE - that silty bottom of pond and
freshwater outflow may create
conditions to attract turtles to area -
"plume" of silty, partly fresh water going
offshore.

④ RECAPTURE

53

6 MARCH 81 6:45 PM Pond-net
FRIDAY

3297 LFL
3298 RFL

"Reward
Tel. 395-6409" inscribed - algae in inscriptions

S - 62.0 cm x 45.9

C - 65.5 cm x 55.6

PLASTRON - 49.5 cm

HEAD - 9.5 cm

TAIL - 15.3 cm

WEIGHT - 67 lbs

- Big skin barns in tail area
- green alga on each side of plastron
- healed pieces out of 4 flippers -
- Scum on carapace
- Stomach pumped - slime tissue in mouth, black extensive stain on tongue, and horny portions of mouth. Red foath coming from mouth - sample retained from stomach.

Released on 3/7 at ~ 7:30 AM into Kibob Bay
No photos taken - fishermen on adjacent distance ledge.

⑤ RECAPTURE

55.

6 MARCH 81
FRIDAY

8:45 PM

POND - NET

3312 RFL ^{"TEL 395-6409"}

3311 RFL S - 63.2 x 48.6

3498 ^{2nd largest sculp}
RIGHT

C - 67.1 x 58.5

PLASTRON - 48.1

HEAD - 9.2

TAIL - 16.1

WEIGHT - 70 lbs

- Green alga on each side of plastron
- healed hole in right distal front flapper -
healed pieces (bites) out of fronts & hinds
- Scum on carapace
- Skin barns by tail
- knob above left eye

Stomach sample taken.

Released 3/7 into Kiholo Bay at ~ 7:30 AM
No photos taken

⑥ RECAPTURE

7 MARCH 81
SATURDAY

6 PM

Pond-net

3481 LFL S -

45.3 x

36.2

Note

DOES

NOT Mean

3482 RFL

C -

49.5 x

42.6

Fish

PONDS -

But RATHER
Refers

PLASTRON -

36.2

HEAD -

7.3

to

TAIL -

8.7

Lagoon
to KITHOLO

WEIGHT - 30165

GHB

- Shiny algae on carapace
- RFFD 1st large scale OK - healed slit
- R & G algae on plastrons
- small skin bumps
- healed "bites" on hind flippers
- very sharp claws
- Red algae on legs
- Released 15 minutes after capture, out S channel into Bay.

(7)

61

~10PM Pond - HAND capture under Ledge

3528LFL

S - 67.8 cm x 51.4

3529RF

3530LFL

C - 73.0 x 64.0

2ND
SCALE

PLASTRON - 54.1

HEAD - 9.3

TAIL - 17.0 WEIGHT: 94 lbs

- Dark carapace with yellow blotches
- ^{healed} "Bite" pieces missing from hind flippers
- Slimy algae on carapace
- Skin barnacles

Released from black-sand campsite beach
at about 11:30 P.M.

it

7

2
 2

7
 2
 4

	CAPTURES	10/80 STRAIGHT LENGTH	3/81 STRAIGHT length	~ 5 month cm INCREASE	cm/mo	
1.	3303, 3304	53.6	54.7	1.1	.120	.286
2.	3526, 3527	new capture	42.4			
3.	3319, 3320	49.6	50.6	1.0	.200	.286
4.	3297, 3298	61.0	62.0	1.0	.200	.214
5.	3311, 3312, 3498	63.0	63.2	0.3	.060	.142
6.	3481, 3482	44.2	45.3	1.1	.220	-
7.	3528, 3529, 3530	new capture	67.8			

CAPTURE (6 net; 1 hand)

7 different turtles, of which 5 are recaptures. 4 were originally tagged in March 1980 and recaptured in October 1980. I was originally tagged in October 1980.