

Letters

Two-ended food chain

George Balazs says more turtles means fewer jellyfish. I contend that more turtles means more tiger sharks, the predator of the turtles. Just ask the divers... The tigers are coming close to shore.

We have a lot of turtles now, and I feel that we need some sort of balance to offset this situation. Maybe a bounty for the tiger sharks, or set an open season for turtles once in a while.

I would rather be stung by jellyfish than be devoured by the tiger.

L. OSATO

1970's

Old law a new threat to turtles

By BRUCE BENSON
Advertiser Science Writer

When marine biologist George Balazs noticed turtle-skin purses on sale in Shirokiya's at Ala Moana Center, he notified management that selling turtle products is endangering the species.

Balazs, a researcher at the Hawaii Institute of Marine Biology, is an active voice in an international movement to protect all species of marine turtles. He has produced excellent results in his notices to some retail outlets.

Store managers at J. C. Penney's and Liberty House, for example, listened to his arguments and promptly removed all turtle-product items from the shelves.

Shirokiya's, however, went to Federal and State officials and wound up with a State-issued license giving them permission to continue selling their purses — thanks to an old Hawaii law.

For Balazs, the turtle-products license is galling. "I think that requiring a license for the import of these products gives their sale a degree of false legitimacy, a false facade of it being okay to sell the stuff," he said yesterday.

BALAZS AND OTHER pro-turtle forces thought they had achieved success in relieving the hunting pressure on the creatures when the State Division of Fish and Game adopted Regulation 36 to prohibit further commercial exploitation.

While that may be the rule for Hawaiian waters, it now turns out that the division has an earlier rule known as Regulation 11 that allows the licensing of imported marine products that are illegal to take locally.

Adopted before Statehood, the old rule apparently intended to ensure the delivery of fish products to the Islands from elsewhere when those products were out of season locally, hence illegal to take here.

The problem of "endangered species" has become more critical in the years since Rule 11 was written. But a division official said yesterday that he must still follow it and issue permits to those who seek to import marine products that are banned within Hawaii.

"If the product cannot be taken legally from the imported areas, then such provisions would be taken care

of there by people who would be concerned. Our concern is to protect it here," said the official, who wished to remain anonymous.

BALAZS WROTE in a recent issue of 'Elepsalo, the Journal of the Hawaii Audubon Society: "It is regrettable that we have not yet become responsible enough to protect the world's other declining turtle populations from our commerce here in Hawaii."

There is an attempt, meanwhile, by the U.S. Fish and Wildlife Service to restrict turtle trade within states and importation into the United States.

But one problem, according to Kimberly Wright, special agent for the service in Honolulu, is that once a product gets to the retail shelf the burden of proof that it came from an officially endangered species shifts to the Federal Government.

"A lot of times, by the time a product is made into a commercial article it is almost impossible to identify the species," she said.

That difficulty may turn out to work to the advantage of local conservationists, since Regulation 11 says the seller must identify the species of the goods being sold before the State grants a license.

MEANWHILE, Elsie Shimabuku, head of import and export here for Shirokiya's, assured a reporter yesterday that the sale of the turtle purses is entirely within the law.

And the Pocketbook Man, another Ala Moana shop spotted selling turtle products by Balazs, said yesterday that are selling none of the wares. (Balazs claims he saw them on the store's shelves Monday.)

Still others to catch his eye include Betty Ford, who served turtle soup at the White House last spring, according to Vogue magazine.

Balazs sent notification to the First Lady — but, as he reported in the 'Elepsalo journal "short letter from social secretary—to my knowledge, no corrective action taken."

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Ecologist: Shoot fawns

MADISON, Wis. (UPI) — A University of Wisconsin wildlife ecologist is gunning for Bambi.

He says hunters who shoot fawns rather than bucks or does should be praised, not scorned.

"Hunters who shoot a fawn should be rewarded in some way, not condemned," the ecologist, Orrin Rongstad, said. "They're helping the deer population more than hunters who kill larger, older animals instead."

Rongstad said an ideal deer season would concentrate harvesting efforts on fawns. Hunters should get a reward for shooting fawns, such as a guarantee of a party permit next season, he said, while hunters shooting adult does should be penalized and those killing older bucks should be limited by a lottery system.

Rongstad said predators and

weather have been the main population control factors for deer.

"Through laws and personal choice, man has concentrated hunting pressure on older deer, especially males, changing the natural sex and age structure of the deer herd," he said.

Rongstad said the result has been a large concentration of younger deer, while the range of ages — which should extend from fawns up to 8 year olds — has been shortened. He said bucks older than 3½ years are rare in Wisconsin.

Some deer are lost to starvation in northern Wisconsin almost every winter, he said, and fawns are the first to succumb. He said harvesting fawns would help reduce those losses.

Herd productivity is also affected by a dominance of fawns,

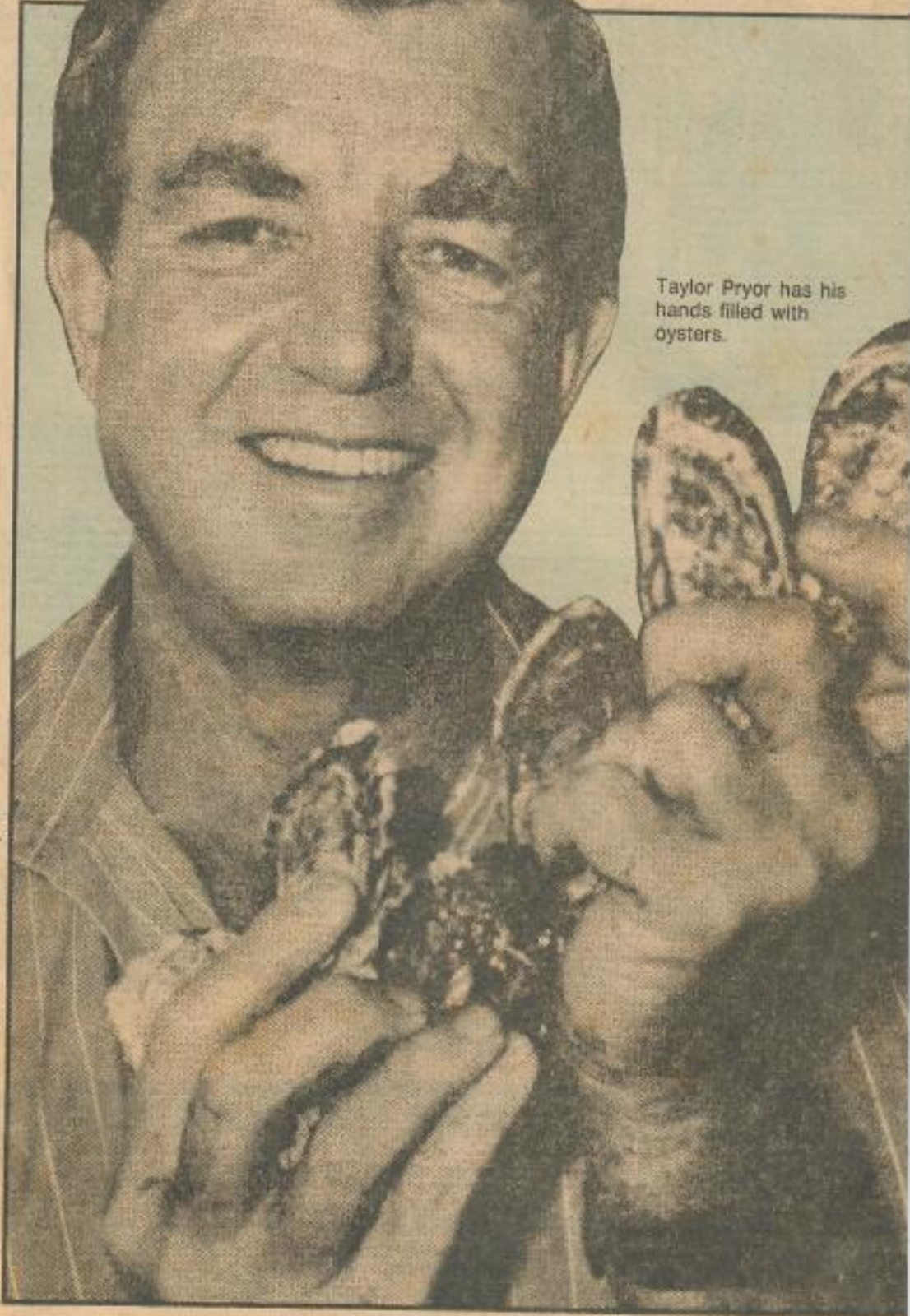
Rongstad said. He said fawns are either nonproductive or less productive than does and an overabundance of fawns makes it more difficult for herd numbers to increase the next year.

"I expected this to stir some controversy," Rongstad admitted after his views were made public in a routine news release from the university's extension department. But, he added, "We're creating worse problems rather than helping."

"If the hunter is happy with one-third less meat, he shouldn't be criticized," Rongstad said. "We shouldn't call him names because he shot poor little Bambi."

"If people only knew," he said. "The agony and slow death of starvation in the woods is so much worse."

Ad



Taylor Pryor has his hands filled with oysters.

Aquaculture

A shellfish glut? Hardly, but maybe someday. . .

By Barbara Hastings
Advertiser Science Writer

Three years ago, Hawaii's prawn farmers were afraid that if an export trade were not created for their luxury crop, there would be a glut of the shellfish on the market by the following year.

As it turned out, there was no major export market then — or now — and no glut either.

By this year, according to projections in 1978, the number of prawn-farming acres should have quadrupled. It didn't happen. There were nearly 200 in 1978 and about 273 now.

And there are fewer prawn farms than there were three years ago.

The yields projected for those ponds were way off, too. The state estimated a few years ago that there would be more than 900 acres of aquaculture ponds in Hawaii this year and they'd be pouring 2.2 million pounds of prawns onto the market. By year's end, actual sales are anticipated to be only 260,000 pounds.

Besides these fresh-water prawns, Hawaii was also to see huge production of oysters, catfish and other animals on the market that would have been raised in aquaculture systems.

These really haven't materialized yet, either, although Taylor A. "Tap" Pryor dedicated the remake of his Kahuku Seafood Plantation yesterday and promises millions of oysters for Hawaii and abroad.

What happened to the aquaculture industry? Was it a fantasy? The state of Hawaii doesn't think so and neither do the aquafarmers despite sagging production.

Rick Gibson, who heads Amfac's

Aquatech on Kauai and who helped devise all those figures three years ago when he was director of the state's aquaculture development program, remains confident of the aquaculture industry.

"I think the numbers are right, but the timing was off," Gibson says.

The state still is saying aquaculture will be a \$20 million business in two years and about \$300 million in less than 20 years.

This year, the total aquaculture industry was a \$5.5 million business, but two-thirds of that was in research, training and technology transfer. Only \$1.7 million was in commercial sales, a drop from last year's \$2 million.

Several things have plagued the budding industry. First of all, based on small-scale ponds, state scientists estimated almost a decade ago that it was possible to get 3,000 pounds of prawns per acre per year. That figure somehow went from a projection to a hard and fast criterion and was the yield farmers expected.

In actual operation, though, the average for the state's 23 prawn farms is only 2,000 pounds an acre a year. That's the same figure — 2,000 an acre a year — that University of Hawaii aquaculture economist Dr. Yung Shang says is the borderline. Over that, and you start making a little money.

Another trouble has been supply of baby prawns.

While some of the larger farms have their own hatcheries, the state's Anuenue Fisheries Research Center supplies most of the farmers with the baby prawns.

Over the past couple of years,

See Aquaculture on Page A-3

Aquaculture—fact or fantasy? *Lag blamed on unrealistic data*

from page one

something as yet unknown has dogged the state's Sand Island hatchery and farmers weren't able to get the number of babies they needed. Things are better now and farmers are supposed to have enough for the next season.

But Spencer Malecha, a biologist who works with Anuenue and the university, thinks there's another problem besides babies. It's who makes up the projections, he says.

Asked why the industry wasn't doing as well as folks said it was going to, Malecha says, "It's not because of the industry and it's not because of the animals. Maybe it's because of the bureaucrats. They shouldn't have predicted things like that.

"Everybody looks at the farmer and the biologist and says, 'Hey, why haven't you reached the predic-

However, Corbin adds, the next two years are going to produce "a large spurt of growth" for the aquaculture industry in Hawaii. Folks are experimenting with more species and with different production methods, too, he says.

But prawn farming remains "a high-risk business and the yields per acre have not been 3,000 pounds," Cortan says.

And Amfac's Gibson adds, "Frankly, the way it's been done to date, it's just not a profitable business for a large-scale or corporate-farming approach. There's not enough consistency of production, the yields aren't high enough and it's labor intensive."

But Amfac is not discouraged, says Gibson. "We're achieving our objectives." That means they're learning and trying new things. "Our whole business position is that with the technology we have we can make a marginally profitable business of this wild

search at the Kahuku Prawn Co. on rotating and grading prawns.

But Malecha says domestication is the answer to the future success of the prawn industry.

"It took megabucks to domesticate the chicken," he adds, to say nothing of a lot of years, and the same is needed for the freshwater prawn.

Domestication — altering a wild animal species so it can be controlled in a predictable manner by humans — is what stands between Hawaii and a major prawn culture industry, Malecha says.

"Take all the things it took to make a white leg-horn chicken," he says. "Don't judge aquaculture with a double standard. Don't say five years for aquaculture what for terrestrial (land-based) agricultural took 100 years."

Malecha says domesticating the Malaysian prawn could take 25 years. "We're really on the first step of

tion? They're not our predictions," Malecha says. Malecha thinks the prawn industry needs to get organized. A lot is going on in aquaculture, he notes, but not in concert. Industry is only one part of it, he says. The state, research and extension services all need to "sit down and plan the domestication of the animal."

Art Lowe is one of the reasons the state's predictions have not been realized.

Amid much hoopla, which seems to surround many of the groundbreaking and announcements of the aquaculture industry, Lowe said in 1978 that he would create the state's largest prawn farm at Kahuku. He said it would be 400 acres, bigger than the 300-acre one C. Brewer was building on Kaula.

C. Brewer also broke ground amid bombastic festivities, but last year, blaming the Kaula weather, closed the farm. This is another reason the state's predictions have not been realized.

Lowe Aquafarms Inc. is operating on the North Shore, but only at 110 acres. A modest expansion is being planned, although nowhere near the 400 acres, Lowe admits.

But that's because he says he's doing so well elsewhere. Lowe says he has aquafarms in Ecuador and Malaysia and the economies there are much more attractive than here.

Lowe and C. Brewer were to add a total of 700 acres to the Hawaii prawn industry.

"Brewer went out and that screwed up the official projections significantly," says John Corbin, director of the state's aquaculture program.

His goal: 100 tons of oysters a month

Taylor A. "Tap" Pryor has a "space-age fishpond" on Oahu's North Shore, which is designed to produce 100 tons of oysters a month.

ment through domestication and improved management techniques."

Speaking of improved techniques, Gibson notes, "I'm looking out my window at a prototype sorter of for the first time in the world and expect to use it for the first time on Tuesday." That sorter is to grade the prawns by size so they can be separated.

Anuenue's Malecha thinks this is a key to successfully moving aquaculture ahead.

Right now, harvesting of prawns is done by net. The small guys and the net-wise get away. Prawns of the same age vary widely in size; they fight and establish territories.

If they can be separated according to size, not age, growth probably will be better, Malecha says. Besides, right now, the ones that escape netting may breed in the ponds, "and you may be breeding net-wise animals or breeding smaller prawns."

If the ponds are drained down and all the prawns captured and graded for size, this might help, he says.

Another possibility being investigated by prawn farmers is polyculture, growing more than one species in the ponds. Aquatic Farms is growing tilapia in cages above the prawns. The work there is funded by a \$30,000 National Science Foundation grant.

Malecha said NSF also is looking at funding re-

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calendar honolulu

In dedication ceremonies of the Systemculture Seafood Plantation yesterday, Pryor called his Kahuku facility 10 times more productive per acre than any farm on the globe.

It's taken Pryor at least eight years, some false starts and something like \$12 million to get the farm under way, but he says next month will be his first real commercial send-off when a half-million oysters are to be shipped to the Mainland and Europe.

Of the investment capital, \$6 million is a loan from American Savings of Honolulu, which is guaranteed by the federal government under the Farmers Home Administration program. The rest of the money came from private investors through limited partnerships.

Pryor says he can grow a "fat, full, light-weight" oyster in seven months in his on-land, controlled aquafarm.

Using 36 million gallons of saltwater a day, pumped from wells off the old Kahuku airstrip, the farm is "really a series of monocultures," Pryor said. The first step is to grow protein-rich plankton in thick masses (which looks like dirty water) and this in turn feeds the oysters. The used water from the oyster trenches is used to grow algae.

But Pryor, called a visionary and an innovator by Gov. George Ariyoshi during the ceremonies, isn't content to stop with oysters.

The algae or seaweed might be a crop in itself or be used as food for such delicacies as abalone or turtles, he said. He also plans clam and lobster production, making protein powder and installing windmills to move his pumps.

Ariyoshi, speaking warmly of Pryor and his pioneering operation, told him "I want you to make a pile of dough here. That's what the system's all about."

—By Barbara Hastings

Shrimp breeding breakthrough

A number of foresighted people kept talking about marine shrimp a few years ago when everybody else was talking freshwater prawns.

Shrimp has a major advantage in that it already has a built-in market, both in the United States and other parts of the world, and the ocean catch cannot meet the demand.

However, there was one problem that marine shrimp had that Malaysian prawns didn't: They wouldn't breed successfully and repeatedly in captivity. But over the past three years, breakthroughs have been reported.

Today, there are a number of shrimp operations under way or planned for Hawaii, and some exciting research is being done.

IKKO Hawaii Aqua Culture Co. Ltd. at Kahuku is operating a 13-acre pilot operation of growing shrimp for export to Japan. John Corbin, head of the state's aquaculture development program, says they are getting about 1,000 pounds an acre and expect 4,000 an acre when they get into full swing operation.

Also planned for Kahuku is a 100-acre, \$10 million shrimp

farm, complete with its own hatchery to breed babies. Coca Cola Co. and F.H. Prince Co. were to jointly operate this facility, but Coca Cola is pulling out.

University of Arizona researchers working with this venture are already established at Kahuku doing species studies and expect the Prince Co. to continue the plans.

And planned for Molokai is the 100-acre Orca Sea Farms. Orca's to break ground on the first installment in March and will also have its own hatchery.

But at Oceanic Institute in Makapuu, director Robert Schleser says they've got the most exciting shrimp news going.

In small-scale experiments, Schleser says, they've been feeding cow manure to shrimp "and they've grown to 31 tails per pound in 60 days."

Normal growth rate is only half that, Schleser says, and cow manure is free or nearly so, while normal shrimp food costs about 40 to 50 percent of the production costs. "A nice profit may be realized," says Schleser.

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From Riding the R

By John Barbour, AP Writer

LOS ANGELES — Only 45 years ago the young cowboy from Oklahoma — broad-brimmed hat, boots and all — stepped stiffly from the railroad coach he'd ridden across the country, checked his guitar and his suitcase and began pounding New York's sidewalks looking for a job.

He wanted to sing.

It wasn't that he thought the cowboy hat and boots would help. It was just the way he dressed back home.

In fact, Gene Autry looked much like the cowboys he sang about, including the one who got spruced up to visit the city, shedding his bandana and wearing a tie.

Today, Gene Autry is 66. He dresses like the conservative businessman he is. He owns a string of radio and television stations, a hotel in Palm Springs and the California Angels baseball team. He hopes to win an American League Pennant in a year or two. He once owned the stately Mark Hopkins Hotel in San Francisco and a number of other hotels. In short, Gene Autry is a multimillionaire. He doesn't sing for his super anymore, and even if he did, his fans wouldn't recognize the voice.

IT IS DEEPER NOW than that of the white-hatted cowboy whose movies were built around his songs. He's come a long way from Tioga, Tex., where he was born, and the Oklahoma ranch where he helped his father raise mules and horses and cows as a youth, and the railroad ticket offices in the Southwest where he learned Morse, wrote train orders and sang to his guitar to pass the long night hours.

He started singing on station KVOO in Tulsa, and played to civic clubs like the Rotary. The depression was upon the nation and he was only working part time on the railroad.

"Everybody was workin' part time. Looks as if this thing keeps going the way it is, they're going to be workin' part time again."

In his first recordings he scored a big hit with "That Silver-Haired Daddy of Mine," still one of his favorites. Then the hit parade continued with songs like "Mexicali Rose."

They wrote Autry into a Ken Maynard movie, Maynard being one of the kings of the rootin', tootin' shootin' set. The movie was "Old Santa Fe." Autry did two songs and had a part in the barn dance sequence.

"The picture did so well that in a lot of places on the theater marquees they billed me above Ken Maynard, and I was just a supporting player," says Autry. They quickly put Autry into a Western serial, 12 cliff-hanging chapters, and he was on his way.

"THE LAST MOVIE I made was in 1962 or somewhere around there," Autry says. "I couldn't tell you the name of it, tell the truth. I made so many. Let's see. I made 56 for Republic, one for 20th Century and the serial, and I did 40 for Columbia in which I



was a partner. And then I did 100 half-hour shows for television.

"That's a lot of ridin'. A lot of ridin' and shootin'. I was asked by some guy sittin' there how many fights have you held. And I said just figure the pictures, and there was one or two in every picture.

"I fought more rounds than Dempsey."

After 3½ years in the Air Force in World War II he bought his first radio station, KOOL, in Phoenix. His partner was Tom Chauncey who remains his partner today. Then he bought another station in Tucson. Today most of his stations, from Los Angeles to Seattle, are grouped under Golden West Broadcasters.

But it seemed he had all his eggs in one basket, a government-controlled basket. He decided to diversify. "That's how I happened to get into the hotel business."

But the hotel business was tough, too, so he sold the Mark Hopkins in San Francisco, and the Continental Hotel in Los Angeles.

He'd been an ardent baseball fan since his youth. He knew Dizzy Dean and his brother Paul, and in his Chicago days he met a lot of ballplayers. His stations broadcast the Giants and Dodger games on the West Coast. But when the Dodgers decided to go to another station in Los Angeles, Autry looked for his own baseball franchise. Which is how he came to own the Angels, an expansion club.

It all keeps him pretty busy. He goes to almost every home game, and tries to make one road trip a year. But he never forgets where it all began, in simpler days, in a more simple America.

Range to Rolling in Clover



"I DON'T THINK the country or the world as a whole has been in such damn turmoil as it is right now . . . It's a different generation than I was brought up in. They're slouchy. They don't care how they dress or anything like that. When I was a young guy growing up, I always wanted a nice haircut and my shoes shined and a good-looking outfit . . . And now it just seems the opposite . . ."

"You didn't read or hear about the dope you have today. Of course back then there was prohibition, so you might see young men, but not kids, drinking out of fruit jars or something like that. But you didn't hear of dope peddling."

"Sure there's a lot of good kids around, too, many fine ones. I think unfortunately you read about the bad ones and you don't read about the good ones."

Gene likes to take a visitor through the old scrapbooks of his days as a singing cowboy. His records have sold almost 40 million copies. His biggest hit was "Rudolph The Red-Nosed Reindeer," which accounted for 10 million of those. But his favorites were "South of the Border," written by two Englishmen, and "Silver-Haired Daddy of Mine," and his theme song, "Back In the Saddle," naturally.

His favorite film was "The Last Round-up." He has purchased all of his old films and they are running now on his Los Angeles television station. "I forget to tune them in half the time. I have to watch them to find out what they are all about. If you make that many pictures over 25 years, it's pretty hard to remember."



Gene Autry, the white-hatted cowboy tenor of the 1930's, is now a 66-year-old businessman with "a lot of ridin' and shootin' " — and nearly 100 movies and another 100 TV shows — behind him.

Tips ensure seafood freshness

Taste America's healthy catch! Eat seafood and find taste, nutrition, value, and variety.

Including both shellfish and finfish, over 500 seafood species are commercially available in the United States for consumption. Unfortunately, many people do not take advantage of this natural resource. Part of the reason could be a lack of knowledge about purchasing and preparing seafood.

Below are some common questions and answers about seafood that hopefully will help the consumer in utilizing this healthful resource.

Q. How do you choose fresh seafood?

A. Finfish

- Flesh is firm and springs back when gently pressed with the finger.
- Fillets and steaks have a fresh cut appearance and color.
- Odor is fresh and mild, not offensive.
- Eyes are bright, full, and not sunken in head.
- Gills are pinkish red and free from slime.
- Skin is shiny; scales are firmly attached.

Shellfish

- Be sure they are still alive immediately before cooking. (Lobsters and crabs should be moving, and oysters, clams, and mussels should be holding their shells tightly together.)
- For fresh, heads-on shrimp, head is still attached to tail section; shell and flesh are free of black spots; odor is mild, not offensive; and flesh is firm.

Q. How do you choose prepared seafood?

A. Frozen Fish and Shellfish

- Flesh is solidly frozen, with no discoloration or freezer burns (white, cottony appearance).
- Odor is not evident, or is slight, not offensive.
- Wrapping is moisture-vapor-resistant. There is little or no space between the fish and the wrapper.
- Package is free from damage and labeled clearly.

Canned Seafood

- Labels are legible, and cans free from damage, rust, and bulges.
- Upon examination, contents match the description of the size of pieces, the packing medium (oil, water, etc.), and color of the meat as listed on the label.

Q. Is seafood hard to prepare?

- ### A.
- Brochures and cookbooks on seafood preparation are available. You will find that seafood can be poached, baked, fried, stuffed, grilled, boiled, broiled, microwaved, and even barbecued. Basically, seafood is quite simple to prepare and takes relatively little time to cook.

Q. How nutritional is seafood?

- ### A.
- It is highly nutritious and can be easily digested. As a result, fish protein is quickly absorbed and its nutrients utilized by the body. An added bonus is that seafood products are low in calories.

Create innovative education programs

"The 1983-1984 school year promises to be an educationally exciting and fun one," state marine education specialists Kevin Howe and Nita Ferguson who work at the Laboratory's Marine Education Center on the Biloxi campus.

Howe and Ferguson have developed some new and innovative education programs for all age groups from kindergarten to adults. "Not only will we offer presentations at the Center, but we will also offer them at schools through our Outreach Program," adds Ferguson, "and, we will visit other meeting places to lead nature walks, interpretive programs, or slide shows."

Feature sea turtles

Beginning with this school year, the Center is offering a number of special programs, events, and activities all centering around a specific topic. The subject of SEA TURTLES was selected to be the focus of attention this year.

Many of their school programs follow a discovery learning approach where the students actively participate and are encouraged to use their senses—especially touch—to learn. They "discover" in part on their own and in part through their instructors.

This approach does have objectives in terms of a subject or concept, but it is less rigorously designed than more traditional learning approaches. Among other things, this approach helps to develop the student's observational and exploratory skills.

In addition to offering the tour and media presentations at the Center itself, various discovery programs have been created for grades one through six. For four- and five-year-olds, they have a discovery program called "Kinderquarium," which covers a variety of common aquatic animals. For children over eight, they have a program called "Observation/Exploration" to help develop greater observation skills in children.

Use dramatic approach

One of the Center's most innovative new instructional tools is

the Mississippi Sound Stage Program, which takes a dramatic approach to elementary science education. Through a variety of lively and humorous skits, the students "laugh and learn." Costumes representing sea creatures are used in the skits; one program covering marine invertebrate adaptations is called "Invertebrate Survival Secrets," another one is "Masterpisces Theatre" (about fish), and another "The Snake: TAKE 1." These programs are still in stages of development, but will be ready to start after the first of the year.

"Beachcombing Biology" can be taught at the Center or schools, but preferably at the beach. When it is feasible, the students are taken seining along a Mississippi Sound beach and organisms captured are passed from hand to hand and described.

Some other field-oriented programs are patterned after the very successful Outdoor Biology Instructional Strategies (OBIS) programs developed at the University of California at Berkeley. These are a series of simulation games or activities designed to teach biological concepts and topics. Many activities may be done in the classroom or school yard.

For students or adults who can spend some time outdoors, Howe suggests a marsh tour at Gulf Islands National Seashore. Through the generosity of the National Park Service, he will lead johnboat tours through the bayous of the Seashore headquarters site in Ocean Springs. The ecology and values of the salt marshes will be described, while being observed firsthand from the boat.

Howe and Ferguson have an instructional program on how to set up and care for a small aquarium with either fresh or salt water animals. A number of other programs are also available, or can be "tailored" to a particular group's needs.

For more information about these programs, contact the marine education specialists by phone: (601) 374-5552, or write to them, care of the J. L. Scott Marine Education Center, 1650 East Beach Blvd., Biloxi, MS 39530.

Ariyoshi's Quote Questioned

I thought that I would never see a statement so foolish from a political devotee: "I have been in politics for quite a long time and I can say without any reservations that I have not made any political deals. . . I am very proud that I can make that statement."

This laughable quote appeared in a Sept. 24 *Star-Bulletin* article.

That extraordinary statement is reminiscent of the Nixon dogma, his "Checkers" speech and his "I'm not a crook" pronouncement.

Believe it or not, that stupendous declaration was made by our governor, quiet and ineffective George Ariyoshi.

Ariyoshi has proved his obsolescence in the governor's office!

William D. Nueske

Ariyoshi Defended

I am an admirer of William D. Nueske's intellect and read most of his letters with interest.

However, his derisive comments on Sept. 30 on Gov. George Ariyoshi's statement reflect a lack of candor and humility.

First, the governor's statement is nothing "laughable," but it is indeed an honorable statement one could make with proven deeds.

Secondly, to make an analogy with the governor's statement with a proven crook like Richard Nixon's is a virulent attack on the governor's character. Nueske owes the governor the apology unless he could produce the concrete facts to back up his statement.

Yoshio Takizawa

Ariyoshi's Achievements

I am hearing an increasing number of unfair criticism and castigations thrown against Gov. George Ariyoshi without concrete facts.

No one can claim infallibility and Ariyoshi is no exception. But our governor is a man of prudence, dedication and selflessness.

I'll enumerate just few of his many outstanding achievements.

1—He is the first governor in Hawaii who has formulated comprehensive state guidelines of actions in his State of the State addresses.

2—Ariyoshi had put forward the idea of controlled growth, because of limited natural resources, the deterioration of environment and the strain on social welfare funds.

3—He has propelled Hawaii as a pioneer in the development of energy from sugarcane, geothermal power, experimental wind generation and ocean thermal energy conversion that would make Hawaii independent of conventional energy sources.

4—Aquaculture development, including the world's largest shrimp hatchery.

5—Establishing better inter-island coordination to enhance mutual social welfare.

6—Establishing better state and city coordination dealing with such problems as crime, schools and recreational facilities.

7—Developing and encouraging farming and diversified farm products.

8—Improvement of the tourist trade.

These are the formidable undertakings and certainly worthy achievements that improve the lives of all inhabitants of Hawaii.

Yoshio Takizawa

Funding Won't Crimp Shrim

By Helen Altonn
Star-Bulletin Writer

Some changes are expected next year in the sponsorship of a commercial shrimp farming venture on Oahu's North Shore by the Coca-Cola Co. and the F.H. Prince Co., but officials of the research facility said it won't be affected.

David Moore, manager of the University of Arizona's shrimp laboratory in Kahuku, said if the program were halted "it would be a big disappointment to 700,000 shrimp" that arrived last week from Costa Mesa for research.

It would also be a big disappointment to the researchers, because they're ready to tackle shrimp farming on a commercial scale.

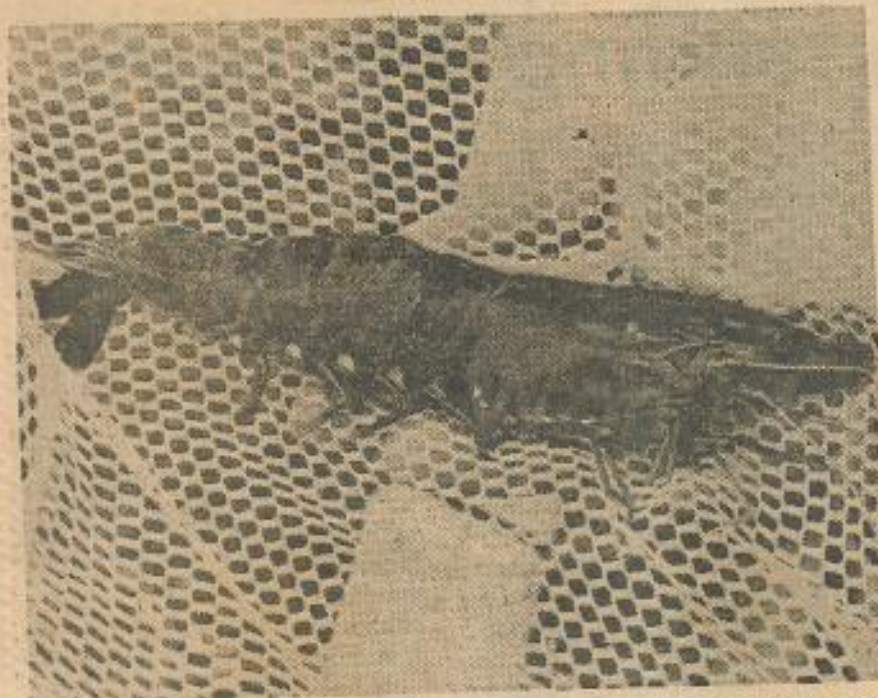
But Moore said "there is no projected end" to the facility. "It's pretty permanent, as temporary buildings usually turn out."

The future of the venture was in question because of Coca-Cola's reported pullout from the commercial side of the project, involving the world's first "greenhouse" shrimp farm.

Carl N. Hodges, director of the University of Arizona's Environmental Research Laboratory (ERL), in Tucson said in a statement released here that the Prince and Coca-Cola companies have been discussing "adjustments" in their partnership, formed to use the research technology for the start of a worldwide commercial shrimp farming industry.

"THIS IS AN internal thing between them," he said.

"But however they may rearrange their own agreements, I don't expect it to affect the university very much. Our research will go on as scheduled, and we will continue to assist the sponsors in carrying out their plans for commercialization."



NURSERY MEMBERThis shrimp from Taiwan is one of the species being raised to restaurant size in plastic-covered raceways at Kahuku.

In Hawaii...

Monday, November 23, 1981

Honolulu Star-Bulletin A-3

p Study

The research facility was established last year on Campbell Estate lands in Kahuku, next to Taylor A. "Tap" Pryor's oyster farm, after the University of Arizona's shrimp farm operations were closed down in Mexico.

Armed Mexican marines from the naval garrison at Puerto Penasco seized the facilities. The incident was blamed on the shipment of 150,000 baby shrimp from the Mexico farm to Hawaii.

But Moore and Duk In Hong, two of the University of Arizona scientists now at Kahuku, said the trouble occurred because of "differences" with some of the persons in authority in Mexico.

Both of them were there at the time and managed to get their records and data out before the seizure. They said some of the equipment already had been sent to Hawaii, but they also had to leave a lot behind.

The researchers at Kahuku have been studying a variety of shrimp species from tropical areas around the world, raising them in "Aquacells," or aquatic greenhouses, with raceways enclosed by air-inflated plastic roofs.

THEY'VE BEEN trying to find the best way of growing shrimp commercially, and which ones have the greatest potential.

And Moore says they're ready to go into market production. "I've been working on this 10 years now, at the National Marine Fisheries Service, then the University of Arizona, with five years in Mexico," he said.

"Based on the work in Mexico and here, we're ready to do it as soon as a schedule is decided. The technology is decided."

He said the scientists are convinced that they can successfully rear blue shrimps from Mexico and white shrimps from Ecuador, with frozen shrimptails



GREENHOUSE SHRIMP—David Moore examines a crop of shrimp under study at the University of Arizona's Kahuku research facility. — Star-Bulletin Photos by Terry Luke.

for export and live whole shrimp for the local market.

A lot of the shrimp now being sold in Honolulu's supermarkets probably comes from those areas, he said.

"This is a salt water marine animal," he said. "They're very clean shrimp of high quality — in perfect condition."

He said the facility's shrimp are fresher than those brought in on shrimp boats because they are immediately packed and frozen.

They can be grown to marketable size

in six to seven months, with 31 to 35 shrimptails per pound, he said.

Hong said the year before he left Mexico, he took some of the shrimp to Japan and "they found no difference in taste from their shrimp."

The shrimp are fed a "synthetic diet" made at a feed mill in Tucson.

"But we don't feed them for two days before harvest, and that makes a lot of difference in taste from the wild ones," Hong said.

UH Geophysicist Charts Pacific Phenomenon

El Nino a Lively One-Year-Old

By Helen Alfonn
Star-Bulletin Writer

A phenomenon known as El Nino that began about a year ago in the Pacific — giving Hawaii a mild winter and stirring global climatic changes—still is going on, says Hawaii oceanographer Klaus Wyrtki.

Its life span may be determined by what happens in the next two months, he said.

The University of Hawaii Institute of Geophysics scientist is one of the foremost researchers on El Nino, a large-scale disturbance in the Pacific Ocean with often devastating effects on fisheries, crops and seabird colonies.

The American Geophysical Union last year presented Wyrtki with one of its rarely bestowed Fellowships in recognition of his

"leadership and research" in the understanding of such phenomena, involving interaction of the ocean and atmosphere.

El Ninos have occurred for centuries, starting around Christmas off the coast of Peru. This is how the event acquired its Spanish name which means "the infant," referring to the Christ child.

But last year's El Nino began in June or July in the Central Pacific. "It was exactly opposite and totally unanticipated," Wyrtki said. "The Pacific completely changed, with a large sloshing of water between east and west on the equator. Currents that usually go to the west are going east."

WYRTKI SAID the 1982-83 El Nino is probably the largest so far this century, causing droughts in Australia and Indonesia, high

surf that destroyed California beaches, flooding in Ecuador and northern Peru and hurricanes in the southern hemisphere.

"And here in Hawaii, we all know we had a marvelous winter — very little rain and calm winds," he said.

Wyrtki and a team of other university scientists and technicians are keeping close tabs on El Nino through a Pacific-wide network of gauges. "The whole ocean atmosphere over the Pacific is totally upset at present and it is still continuing," he said in a recent interview.

"The question is how will it develop?" he said, adding that July-August may be "a decisive phase."

He said if southeast tradewinds pick up very strong, El Nino will

end. But if they don't pick up, he said there is enough warm water left in the southern hemisphere that the event may go on for another year.

He also mentioned an "intriguing possibility that since El Nino started from an already warm ocean, warm conditions may persist for quite awhile — maybe years. There is no real way to predict."

HE SAID there has been "a major shift in the climate into a warmer period" since the previous El Nino in 1978, with slightly warmer temperatures in the equatorial Pacific.

Wyrtki said scientists were able to observe El Nino closely for the first time last year because of a new monitoring system and scient-

Turn to Page A-14, Col. 1

MSB

7-11-83 Monday A1

Other Pacific Islanders Beat a Path to Our Door

Hawaii's Role in Aquaculture Hailed

By Helen Altonn
Star-Bulletin Writer

Kings, prime ministers, governors, traditional leaders and fishery development officers from at least 16 Pacific island nations, territories and states have visited Hawaii during the past 18 months to study the state's aquaculture development program.

This was noted by William A. Brewer, state aquaculture specialist, in a speech this week at the International Conference on Ocean Resource Development in the Pacific, ending today at the East-West Center.

Brewer discussed a paper that he prepared with John Corbin, manager of the aquaculture development program in the state Department of Land and Natural Resources, on "Aquaculture Development for Pacific Islands."

He said Hawaii will play "an increasingly important role as a center for aquaculture excellence in research, planning, training and technology transfer."

"I might also add that Hawaii's impact on this new technology reaches well beyond the Pacific area, as evidenced by a constant stream of visitors to our offices by foreign government agents and businessmen from over 30 nations outside the Asian-Pacific area."

BREWER SAID the most-common need is for aquaculture technical assistance, with visitors "earnestly, and often desperately, shopping for clear, concise and relevant guidelines for planning toward the development of this exciting, expanding new industry."

"Recent acceleration of these contacts has caused us to re-evaluate and affirm our increasing responsibility in providing sound technical guidance and planning assistance, not only to Hawaii, but also to virtually all of the Pacific."

Presenting a little Pacific geography along with his report, Brewer noted that the island groups encompassed by Melanesia, Micronesia and Polynesia contain about 7,500 islands with 40,000 square miles in land area.

Within the islands are eight independent nations, two unincorporated U.S. territories, one U.S. commonwealth, one U.S. state, three "free association" U.S.-aligned territories and seven trusteeship or quasi-territorial governments under France, New Zealand and Australia.

The Coral Sea Islands Territory is the only uninhabited group.

"Despite the Pacific's great political and cultural diversity, all island groups are generally confronted with the same sobering economic realities and infrastructural limitations," Brewer said.

BECAUSE OF the need for greater economic self-sufficiency, he said many of the emerging Pacific island governments are examining economic development alternatives.

"We in the aquaculture development program feel that aquaculture activities have potential for local and export food production, ability to provide revenue and jobs for island people...and, hence, may offer a distinct class of economic activities which are compatible with island needs, available resources and lifestyles."

He said each type of island, wheth-

er an atoll, coral, uplifted coral or high volcanic island, has physical characteristics offering different potentials for development of fresh, brackish or sea water aquafarming.

There also is a ready market for aquaculture products, such as oysters, shrimp and eels, in the major metropolitan centers of the Pacific rim, such as Hong Kong, Sydney, Auckland, Taipei, Tokyo and Manila, Brewer said.

He said nearly all of these cities import more than 50 percent of their seafood from as far away as Europe and the United States, but the Pacific islands are closer. "Moreover, many Pacific island groups can benefit from reduced back-haul rates in a similar fashion as has Hawaii."

FOR THE Pacific Basin as a whole, Brewer said, economic and social constraints appear to be greater obstacles to aquaculture development than environmental or technological considerations.

Few island groups have the population or local demand to support large commercial food-production industries, although the growth of tourism is expected to increase the seafood demand in some areas, he said.

He offered a list of recommendations to encourage Pacific-wide economic development and commercial aquaculture, based on Hawaii's experiences.

One suggestion is that the University of Hawaii, the University of the South Pacific and the University of Guam work together in a regional network to promote and coordinate transfer of aquaculture technology, research, advisory and extension

services.

He also proposed two types of aquaculture development models that he said could provide food, cash and job opportunities for many island nations.

One would be a small-scale operation with nutritional food fishes for local or regional consumption, with family or village aquafarms organized into marketing cooperatives.

The other would be a large-scale production system financed by multinational corporations with "high value, luxury species, such as shrimp or eels," for export to Mainland and Asian metropolitan centers, he said.

It's believed that either one or both of the proposed aquaculture schemes for the Pacific islands could be implemented soon, he said.

FORUM

the Readers' Page

WHAT DO Y'MEAN,
SO THIS IS OZ?...
THIS IS KANSAS.



Let's Hear It for Kansas

Just what does George Balazs mean when referring to what would happen to local Fish and Wildlife Service personnel should they disagree with the policies of Secretary of the Interior James Watt? Balazs says, "Unless they fall into line, they'll be shifted to some two-bit refuge in the backwaters of Kansas." What nerve!

Now really, Mr. Balazs, I've lived in Hawaii for seven years and while I acknowledge Kansas is quite different from Hawaii, it still isn't quite the same as it was portrayed with Judy Garland as Dorothy in the "Wizard of Oz".

Contrary to that movie, Kansas

doesn't exist in black and white. It does have all four seasons in glorious color. Its Flint Hills may not be the pail, but they are very beautiful and nearly all the soil in Kansas is productive.

Have you, Mr. Balazs, ever actually visited Kansas?

You may find out Kansas really has something to offer. And, oh yes, Mr. Balazs, the next time you bite into that sweet bread made in Hawaii, consider this: the flour probably came from wheat grown in Kansas.

Judy Ann Warren

Wednesday, September 16, 1981 Honolulu Star-Bulletin A-21



El Nino Is a Year Old, Still Raising Heck with Climate

Continued from Page One

tific cruises that had been planned.

More than 30 stations were in place on islands throughout the Pacific to measure sea level varia-

tions as part of an ocean investigation called NORPAX, the North Pacific Experiment, which ended in 1961. Wyrski was chairman of the NORPAX committee.

He and his colleagues are continuing to operate the network and are analyzing the data to try and explain the fluctuations and understand what's going on.

The records are now being picked up and mailed to the UH but the stations are gradually being converted for satellite transmission "so we will have instant access to the data," Wyrski said.

He said he has "no doubt" that scientists eventually will be able to predict climatic changes, but for now it's a slow process to put all the pieces together and get a picture of what's happening over large spaces and long periods.

OCEAN-ATMOSPHERE scientists also "have to wait a long time until nature does experiments for us because we don't have adequate computer models to test all possibilities," he said.

Based on studies of past El Ninos, Wyrski proposed in 1975 that they occur after a long period of powerful tradewinds which blow large amounts of warm surface water toward the western Pacific. After the winds subside, he said, the water surges back to the east and buries cool waters off South America and perhaps as far north as California.

But he said the 1962-63 event is "totally different" from all the others.

"There is one school of thought that assumes these events in the ocean-atmosphere system are largely random," Wyrski said.

"They happen every few years and we really don't know how they're being triggered..."

"However, it is not very satisfactory to accept randomness in a system we'd like to predict, so there will always be a search for causes."

One argument that he said can't be rejected or proven is that eruptions of volcanoes like Mexico's El Chichon last year may cause an upheaval in the ocean-atmosphere system.

WYRTKI SAID some scientists, including himself, believe ocean-atmosphere fluctuations are "somewhat more regular than random," with natural or built-in changes "like the vibration of a bridge...a resonance."

After a certain period, a resonant system starts to oscillate, he said, adding that "this is why it is so very important in climate research to get a long series of information — over decades, or longer."

"The surf along the California coast, much snowfall in the Rockies, floods from melting snow...These are all connected," he said. "They are not just local events."

Wyrski said some of the big data gaps may be plugged with a major program starting next year called TOGA — Tropical Ocean Global Atmosphere — which is being sponsored by the National Academy of Sciences through the National Oceanic Atmospheric Administration (NOAA).

He said it probably will be an international effort continuing over the next decade to study changes in the ocean-atmosphere system on large time and space scales.

Sydney Librarian to Give Lectures

The Center for Asian and Pacific Studies Southeast Asia Program is sponsoring a series of lectures for the public and librarians at the University of Hawaii.

Here is the schedule of the lectures by Helen Jarvis of the University of Sydney Library:

—10:30 a.m. tomorrow in Room 11 of the St. John Building on "The Marxist Tradition in Indonesia: The Role of Tan Malaka."

—10:30 a.m. Wednesday in Room 1 of Hamilton Library, specifically for librarians, on "Libraries and Networking in Australia: An Informal Report."

—2 p.m. Wednesday in Room 2 of Hamilton Library, specifically for librarians, on "Interpreting and Applying International Cataloging Standards to Southeast Asian Material."

—2 p.m. Thursday in Room 11 of the St. John Building on "BISA (Bibliographic Information on Southeast Asia) Contributions to Bridging the Information Gap for Southeast Asian Scholars."

Star-Bulletin
SPORTS
all the scores & more

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Nat. Park Service:
Cliff Smith: 948-8218

An Old Hand Returns to

By Harry Whitten
Star-Bulletin Writer

G. Bryan Harry, superintendent of Hawaii Volcanoes National Park during a period of intense volcanic activity, has returned to Hawaii as Pacific area director for the National Park Service.

As such he will supervise all nine units of the park service in the Islands and Guam.

And he will struggle with the same problem facing other national parks — that of fulfilling traditional park functions during a time of tightened budgets, he said yesterday.

Harry replaces Robert L. Barrel, director for the past 10 years, who has just retired but is showing Harry around to the park service units in Hawaii.

Also here is Howard H. Chapman, National Park Service regional director, based in San Francisco, who will accompany Harry on a visit to park units on Guam and Saipan.

Barrel, who is staying in Hawaii, said he considers establishment of a better relationship between national parks and their neighbors as the major accomplishment of his tenure as director.

He said parks personnel have been making greater efforts to work with the communities and that as a result there has been more acceptance of the park service among local people.

HE SAID THE park service has been fortunate in finding staff members who appreciate the diverse cultural aspects of Hawaii. He is also pleased that the service has been able in recent years to recruit more local people.

Another change in recent years is placing more emphasis on resource management, he said, especially in the two larger parks, Hawaii Volcanoes and Haleakala, on Maui.

Park personnel have been working with the state, counties and local people to assure retention of natural values, or their restoration, when

possible, he said.

Parks in Hawaii are also placing greater emphasis on giving assistance to endangered Hawaiian culture, he said. These efforts are especially important in the historical parks.

Harry said Island ecosystems tend to be fragile and that a problem the service faces here is that of trying to preserve natural biota, such as endangered species.

Harry said overcrowding has been a big problem for many Mainland parks but, generally speaking, it has not been a big problem in Hawaii. An exception involves the Seven Pools in Haleakala National Park, where the service is trying to alleviate the problem.

HAWAII + KALAPAPA



G. Bryan Harry



Robert Barrel

Direct National Parks in Pacific

HE EXPRESSED confidence that ways can be found in Hawaii whereby visitors can be managed in such a way as not to impair natural resources.

The nine units of the National Park Service in the Pacific are:

—Hawaii Volcanoes, Puu Honua o Honaunau National Historical Park, Kaloko-Honokohau National Historical Park and Puukohola National Historical Site, all on the Big Island.

—Haleakala; Kalaupapa National Historical Park, Molokai; and USS Arizona, Oahu.

The Kalaupapa park has been established by Congress but agreements have still to be worked out with the state and the Hawaiian Homes Commission before the serv-

ice can start operating it.

The Kaloko-Honokohau park has also been established but is not yet in operation because land for it has not yet been purchased.

—War in the Pacific National Historical Park is on Guam; American Memorial Park, on Saipan.

Harry, a native of Michigan, joined the parks service in 1952, after receiving a bachelor's degree in forestry from the University of Michigan and a master's degree in wildlife management from Colorado State University.

HE BECAME superintendent at Hawaii Volcanoes in 1971 and was there during an intense period of volcanic activity, during which time he

made eruption sites available for public viewing as soon as they were safe.

He also carried on a campaign to thin out the feral goat population.

He left in November 1975 to become Alaska state director for the park service. He returns here from Grand Canyon National Park, Ariz.

Barrel, who was an interpretative planner in his early career with the parks service, has a contract, together with Douglas Pendleton, to develop an interpretative environmental program for Honolulu's new Ho'omaluhia Park.

After that his plans are indefinite but he says he and his wife decided they'd rather live in Hawaii than any other place in the world.

D

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FOCUS

Land, water: chief

Jobs sought; development discouraged

Fifth in a series

By Beverly Creamer
Advertiser Staff Writer

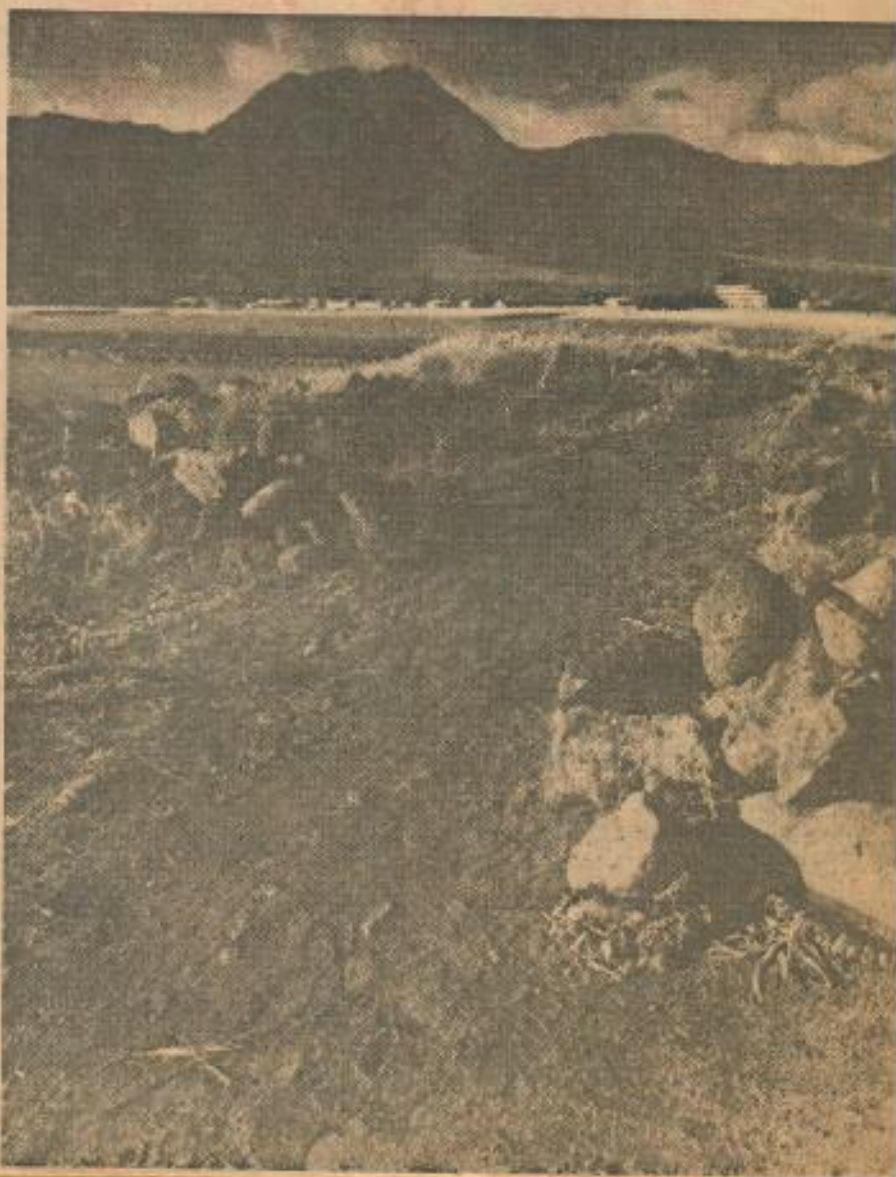
Mike Kahikina slams a hand down on the lectern and the sound echoes through the Waianae Intermediate School cafetorium.

"We're TIRED," he shouts at the City Council. "We're tired of doing your work for you. We see you favor developers and we don't have our basic needs met. You create all kinds of programs, but not for us. We're here to tell you that we are watching."

Kahikina, mouth set, long black braid brushing his back, stalks away from the microphone and the people who have jammed the cafetorium erupt in cheers and applause. It's obvious that the noisiest sentiment in this crowd of around 400 is firmly anti-development.

This is the biggest crowd yet, says a member of the council staff. Nowhere else have so many people shown up for a public hearing on a proposed neighborhood development plan. It's this plan that should determine the future growth patterns for each area of Oahu.

In Waianae, 70 people were listed on the agenda and the testimony indicated a strong conflict with the

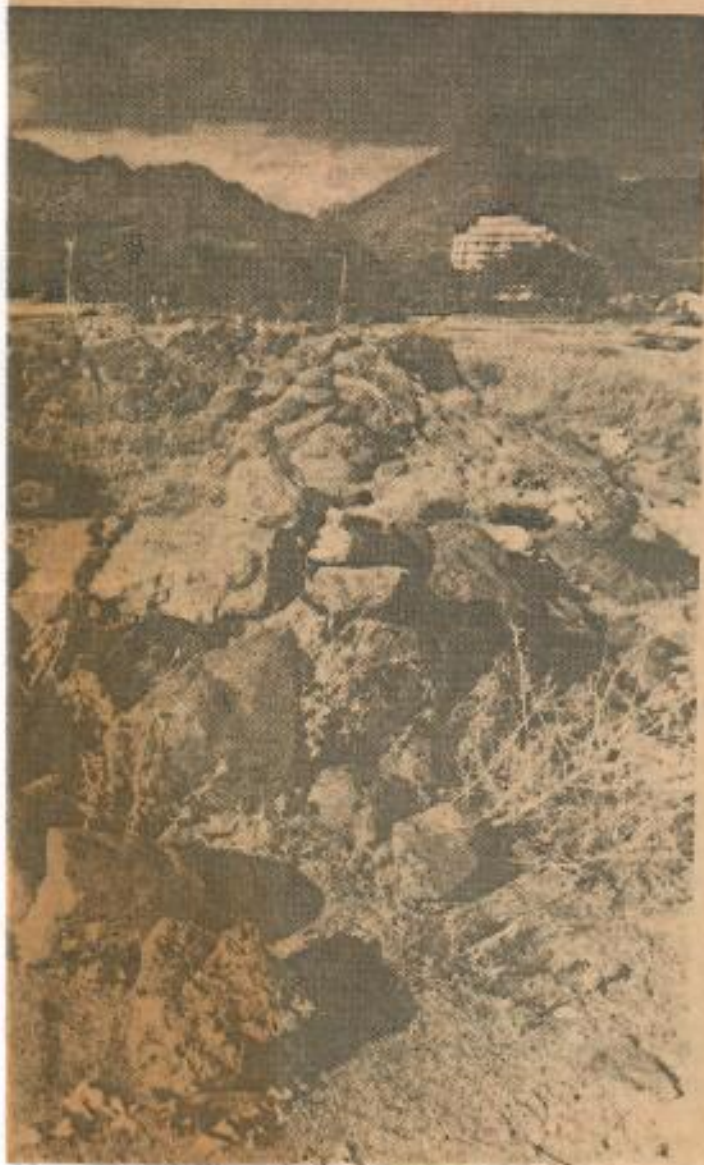


/ waianae

Honolulu Advertiser

Thursday, July 9, 1981

of Waianae issues



the Waianae coast:
problems & promise

A single picture indicates several Waianae concerns as well as its beauty:

- *Kulioloa Heiau, in foreground, to be restored by Waianae Hawaiian Civic Club.*
- *The ocean, holding promise for growth in fishing industry.*
- *Condominiums, which have received a less than warm welcome.*
- *The broad valleys rising to the Waianae range, much of which are potential farmland.*

Advertiser photo
by Roy Ito

...the coastal communities over their future.

The debates over land and water have always been central issues on the Waianae coast and the community is divided over their use. Should the land be kept wholly agricultural? Or should some kinds of controlled development and growth that will bring jobs be allowed?

It's not that Waianae residents are against any kind of construction along their coast, but they are selective.

A 1978 city opinion survey found that residents there were anxious to get more jobs close to home and eager to have more single-family housing built (but not townhouses or apartments). However, there was equally strong sentiment for protecting ocean views and "saving agricultural land."

Two out of three residents oppose additional resort development along the coast.

A major assessment of economic development opportunities for the Waianae district was completed just a few months ago for the city's Department of Housing and Community Development by Peat, Marwick, Mitchell and Co. and the study found a "sensitivity" to further tourism development in the community.

"The sensitivity in its mildest form is reflected in residents speaking out in opposition to further tourism-related development.

"In its most extreme form, it is reflected in the property and personal crimes of which tourists visiting the area are victims."

The study went on to say:

"The seemingly general sensitivity that Waianae area residents have to further tourism development appears to have its roots in the socio-economic problems that prevail in the area.

"These include high and chronic unemployment, the absence or deterioration of the basic family unit, disenchantment with the public school system and the significantly lower-than-average family income earned by a large proportion of the area's residents making it difficult to attain food, shelter and clothing."

It was the Waianae Neighborhood Board that prepared the proposed development plan to radically downzone the whole coast. "The real sentiment here is for agriculture," maintains board chairman Billie Hauge.

And yet many landowners have waited years to be able to develop

their property, however minimally. They are incensed that the development plan may prevent them from doing that.

Fred Blanco is one of those people. For 18 years he says he's paid taxes on his residential property that he hoped someday to subdivide. Now it's supposed to be downzoned to agriculture.

People like Blanco point out that farming in some Waianae areas is just not realistic. At the present time the Board of Water Supply has imposed a moratorium on approving new water meters for anything more than single-family homes or small businesses.

Manager and Chief Engineer Kazu Hayaahida says there's adequate water for existing uses (most of it comes from wells in the Pearl Harbor Basin through pipes that supply both the Waianae Coast and the Ewa area), but no expansion is allowed until additional sources of new water are developed. That could take four or five more years, he said.

Because of the water situation — a situation that has always plagued the dry Leeward coast — the presently existing farms have enough, but any expansion is limited.

It's also limited by the rising costs of property, even in such isolated rural areas as Waianae, and the unavailability of some prime land.

While the area encompasses 60 square miles, some of the best land is out of reach; the richest valley, Luualaei, is mostly owned by the military except for the Mikilua section, while a couple of big landowners (Makaha Valley Inc., and the McCandless estate, for example) and the state (the Hawaiian Home Lands Commission) own other large parcels.

But in fact, says activist Joe Lapiio, not that many people want to be farmers anyway.

A limited survey by Alu Like discovered the same thing: while people wanted to see the rural, agricultural lifestyle retained, they wanted someone else to do the farming.

In that 1976 survey by the private, non-profit organization that administers programs for the benefit of native Hawaiians, 90 percent of the 128 Hawaiian residents questioned said they'd like to see Hawaiians earning their living off the land or the sea.

Alu Like took that as "nostalgia" for the past and for cultural roots,

rather than an indication of personal desire.

Says Lapiio and a host of other voices, the only way the community will have jobs for its young people is through mixed land use: residential, agricultural, light industrial, commercial and resort.

Symptomatic of the split in sentiment on the Waianae coast is the reaction to what may be the largest development now proposed for the area: Makaha Valley Inc. wants to put about 400 houselots of just under an acre to an acre-and-a-half on 587 acres of land in Makaha Valley.

Part of the community wants to see the plans go ahead; part is volubly opposed.

The land is now zoned R-6 which would allow small, high-density houselots, but Makaha Valley Inc. prefers R-1 zoning which allows one-acre to 1½-acre lots.

Those on the Neighborhood Board who want to keep the Waianae coast purely agricultural call for downzoning that land even further — to an agricultural designation that sets 2 acres as a minimum lot size.

But some prestigious community groups — including the Waianae Hawaiian Civic Club and the Waianae Valley Homestead Community Association — stand behind Chinn and Stuart Ho's latest plan for "gentleman" estates on R-1 zoning.

While many speak about the desperate need for jobs and some kind of economic growth in Waianae to provide them, the "lifestyle" rhetoric of others echoes with the same words used in anti-development struggles in Kalama Valley, in Waiahole-Waikane.

Kalani Ohelo, for example, has said all of the same words before. When he came back from Vietnam a decade ago he fought for the pig-farmers of Kalama Valley. Now he is fighting for agricultural lands in Waianae.

Eric Enos grew up in Makaha on the family farm, graduated from the University of Hawaii with a bachelor's degree in fine arts and became a student teacher at Waianae High School. He lasted a semester, driven away, he says, by the inequalities he saw and by the attitudes of some of the other teachers and the administration.

Now he heads the Waianae Rap Center's agriculture project and is determined to keep its farma going to show that small-time agriculture works.

Harry Choy has been a long-time pigfarmer in Waianae. When he first moved to Mikilua, the farming section of rich Lualualei Valley, there was nothing but brackish water. When he went to the service station and said "fill 'er up," it meant slipping into the bathroom and filling up a gallon water jug too.

He's fought one development after another here, he says, and it's a good thing. "Otherwise there wouldn't be enough water left for us to farm."

Enos calls for a setting of priorities on the water, with gardens and farms the first priority and resort use the last.

Ernest Adaniya of the Mikilua Farm Bureau points out that the Waianae coast is one of the most productive agricultural areas on Oahu and land and water must not be diverted to other uses.

Many equate any kind of development with a "Waikiki II" philosophy. "We don't want our community messed up any more than it already is," Gerardo Learned, a student at Waianae High School, told the recent City Council hearing.

"We love Waianae as it is. Please don't ruin it for us."

Fellow student Thurston Gomes said:

"We love the land. We came from it and we're going back to it when we die. We like to live our lives out the way it is . . . We don't want a town, we want a countryside. What with all these things coming up, the rents will rise and a lot of low-income people will end up getting thrown out."

Waianae High student Akoni Mirafuentes had a petition signed by 450 students. It said in part: "We do want jobs but not low-paying resort jobs."

His words were echoed by Office of Hawaiian Affairs chairman Frenchy DeSoto: "High-rise apartments and hotels inevitably lead to clashes between local users of the beach and ocean and the residents of those high-rise apartments and hotels. We have seen the steady erosion of access to the beach all over Oahu and we do not want that to happen any further in Waianae."

She added that "community consensus for years has been that only single-family homes should be built makai of Farrington Highway."

There are already more than 2,500 condominium units in the Waianae district, even though DeSoto said the

community strongly opposed some of the most recent including the Hawaiian Princess, the Surfside and the Maili Cove developments.

Says the Rev. Dean Fujii: "We who live in the community are often looked at as expendable items. What do we the residents reap, really — social upheaval and frustration."

Waianae's 60 square miles of valleys is Oahu's richest fertile crescent. The valleys are home for a major chunk of the beef, two-thirds of the milk, nearly half the eggs and nearly all the chickens produced on Oahu.

There are 248 farms in Waianae — half the number on all of Oahu, even though most of the coast's richest valley — Lualualei — is off limits because of its two military installations.

This coast is also rich in marine life, and presently the Sea Grant program is pulling together a survey to show just how many people make a living from the ocean.

It's not uncommon here to find families using the ocean to supplement small incomes. This coast is rich in edible seaweed and there are as many as 137 varieties of fish.

"At the end of the month when they run out of the welfare check, they take a throw-net out . . . As long as they've got fish and rice it's OK," says Sea Grant's Leeward agent, Mark Sulso.

Dan "Boxer" Paaaina is a special kind of fisherman; his standard

equipment includes scuba gear. He and other diving friends go out by boat, then don their tanks, go overboard and set their nets on the bottom in water anywhere from 20 to 100 feet deep.

Down there Paaaina is free from the semi-paralysis that cripples him on land. He's been in the decompression chamber more than anyone else in Hawaii, he says, and had the bends so many times his body will never recover.

Now, even though his joints ache all the time and there is no way he'll ever be cured, Paaaina can't quit. The sea seduces him. He even talks about it as a mistress.

Years ago, when he was still working as a tile-layer, there were days he just wouldn't show up for work. "I'd get up early in the morning and I'd see the water, so nice, and I'd say I'm not coming to work."

And he'd go out and set his nets on the bottom and herd the fish as if they were steers. "It's just like herding cattle, the principle's the same, just the environment's different. We go around and push the fish into the corral and then put 'em into a bag."

Like other fishermen along this coast, Paaaina keeps what he needs for his family and sells the rest.

The small-time "mosquito fleet" fishermen launch their boats — or in Paul Masuda's case, a motorized surfboard — at the new Waianae Boat Harbor that has replaced Pokai Bay as the center for the crowd that

See Waianae on Page D-2

President and Mrs. Reagan said, "but rather those who could see leading those who could not, those who could help those who could not. The tremendous bond that was forged, where you complemented each other and joined together." The occasion was the American premiere of a long-lost symphony.

names and faces



Waianae

from Page D-1



UPI photo

da McKerrow, 17, gold medal
cent International Dance Com-
White House Mozart concert.

likes to fish.

They return in the warm rays of
afternoon just about the same time
families space themselves along the
floats and breakwater with their
fishing poles and their bait, casting
from shore, sharing dinner and
talking-story as they do.

The largest overall assessment of
economic development opportunities
on the Waianae coast, the recent
study prepared for the city's Depart-
ment of Housing and Community
Development, recommends this kind
of future for Waianae:

Aquaculture and commercial fish-
ing (once there's an icehouse in the
district) are seen as the two most
promising areas in which to develop
a broader economic base for the
coast.

Agriculture can be expanded de-
pending on the availability of water
at reasonable rates. But light indus-
try, and retail-commercial develop-
ments are seen as poor possibilities

upon which to base economic
strength, mostly because there are
more attractive nearby areas for
industrial expansion (Waipahu and
the Leeward industrial parks are
closer to the main population and
commercial areas of Honolulu,
thereby reducing transportation
costs) and because the area is al-
ready losing much of its retail busi-
ness to outside areas that are more
attractive and offer more diversity
to Waianae shoppers.

While the plan noted there are
plans to expand tourism in the area
(an additional 200 rooms at Makaha
Inn, plus the proposed developments
on Campbell Estate land at West
Beach which include 10 hotel sites
with a total of 8,000 rooms, a recrea-
tional boat marina and 3,000 to 3,500
residential units) it also pointed out
the sensitivity of the community to
further resort development and the
chronic problems experienced by
Makaha Inn

Tomorrow: Waianae's 'Hawaiian'
lifestyle and what makes it different.

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**'35⁰⁰ WE WILL ALSO
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BOB'S CARPET CLEANING CO.

Police said yesterday they
have no idea who hoisted a
life containing as much as \$3,000
rough the back window of the
Crystal City (Mo.) Police Depart-
ent.

"It was nervy," police Capt.
Morgan said. "We really
don't think they'd break in here."

23 JULY 81 Hono S-B

Massive Fish Die-off Leaves Mess on Windward Beaches

Thousands of dead fish are continuing to wash ashore along Oahu's windward coast and state fisheries officials say they still don't know what caused the mass kill.

"They're in the water, on the rocks, on the beach — smelling and foaming. It's really bad news. Unbelievable," Larry Beck said this morning. Beck is the owner of Hawaii Nudist Park, which leases beachfront land in Kahuku from the Campbell Estate.

He said he had to hire a truck and workers from the estate to clear away "two tons" of the dead fish yesterday. "It took two truckloads and five people," Beck said.

The fish started washing ashore about a week ago.

"At first, when we had to deal with 100 to 150 pounds (of dead fish) it was manageable — we just dug holes in the sand and buried them.

But two days ago, our swimming area was just filled with tens of thousands of fish. It was too much for us to handle so we called the Campbell Estate property manager and he arranged for the truck and crews to come out."

BECK SAID the workers spent all day yesterday removing the fish, then used a backhoe to bury them away from the beach. Thousands of them still remain "up and down the beach," he said.

He estimated the fish to weigh about one pound each with an average length of eight inches.

The fish are all of one species — the lagocephalus lagocephalus, or what is commonly referred to as oceanic balloon fish, according to Henry Okamoto, an aquatic biologist with the state Department of Land and Natural Resources.

Hono S-B

Deaths of Fish Linked to Rep

It's looking more and more like the deaths of thousands of pelagic (open ocean) balloon fish around Oahu last month were related to their reproductive cycle.

But the experts are still conducting tests to see if the theory can be pinned down conclusively.

Despite extensive examination of the tissues of one good specimen (a

8 AUGUST 1981 Hono S-B A-3

Balloon Fish Washing Ashore by Thousands on Kauai Coast

By Peter Wogner
Kauai Correspondent

LIHUE, Kauai — County workers have been burying thousands of balloon fish that washed up around Kauai's east shore this week, and more fish were reported dead or dying on the shore of Niihau yesterday.

Dead fish have been washing ashore by the thousands on Oahu's Windward shores periodically since mid-July but biologists with the state Department of Land and Natural Resources have not yet determined what is causing the mass deaths.

State aquatic biologist Donald Heacock said little is known about the fishes' living habits because their habitat is far off shore.

"It's possible that just one school died in different areas" and washed ashore at the same time, he said.

Heacock said 5,000 to 10,000 of the beaked, spiny fish washed in at Kilauea Bay Monday or Tuesday, and

more of the dead fish were reported at Pihua and Anini beaches several miles north of Kilauea.

The fish have been buried where they were found, and the beaches are now considered safe for public use, said public works spokesman Russell Sugano.

Heacock said samples of the fish were sent to Honolulu for analysis, but the cause of death remains a mystery. The deaths "could be a normal thing — like salmon dying by the thousands in Alaska after spawning. The thing we don't want to do is jump to conclusions."

Heacock said that biologists need to pick up samples and analyze them as soon as possible and he requests that people report them as soon as they are seen washing ashore. "The ideal situation would be for fishermen to find them offshore while they are still alive, so comparisons with the dead ones can be made," he said.

11 AUG 1981

h Believed A76 roduction

fish that had not degenerated too badly), "we came up with nothing," Jim Brock, an aquatic disease specialist with the state Department of Land and Natural Resources, said yesterday.

But the fact that no sign of disease or infection was found boosted earlier speculation that the fish may have died after spawning, Brock said. He noted also that no one really knows why salmon die after spawning, even after years of study.

The problem faced by Brock and others involved in the investigation is that little is known about the fish, which are usually found far offshore.

Evidence that the fish probably had not eaten for a period before their deaths, as seen in the empty intestinal tracts of specimens, the absence of fat and the condition of their reproductive organs, points to reproduction, Brock said.

The dead fish inundated the northeastern coast of Oahu last month, then began washing ashore on Kauai's east shore—again by the thousands—last week.

Brock said further study will be conducted on samples gathered from Kauai.

En Route to the Philippines

Bushes Visited Johnston Island

Old Johnston Island hands know that the water there can be clear, the diving great and the coral big and white like upturned tree roots.

Vice President George Bush and his wife stopped on Johnston, en route from Hickam Air Force Base to Manila to attend the Marcos Inauguration, in order to do a little snorkeling, a military source reports.

They also were presented with a piece of the magnificent coral from the "natives," who, at last count, numbered about 300 men, most of them with Holmes and Narver construction and military support company. The rest are soldiers, airmen and Coast Guardsmen. Mr. and Mrs. Bush also toured the island which doesn't take long since Johnston, like French Frigate Shoal, is little more than an aircraft carrier anchored forever in the middle of the ocean.

When asked about Bush's travel plans, the Pacific Command at Camp H.M. Smith, naturally was reluctant to field questions about the vice president since his activities do not fall under the CINCPAC umbrella of concerns. Finally CINCPAC said Bush was stopping at Johnston for "refueling."

Bush flew to Manila in a VC-137, which is a modified Boeing 707, the same type of aircraft presidents use. The Air Force says its range is 7,000 miles. From Honolulu it's less than 4,000 miles to Tokyo. Even Singapore is within reach at 6,700 miles.

Funny-looking ships come and go at Pearl Harbor once in a while but when the Observation Island gets here in October its \$70 million radar tracker will turn a few heads.

The ship is a familiar sight around Pearl Harbor but its tracking gear, called Cobra Judy, is new. When the Russians lob those long shots from Turkestan to Pacific waters off Fiji or Kamchatka, the Observation Island will be right there, 'tis hoped.

Another man from the class of '43 — those who entered the service that year — has retired. Lt. Gen. Freddie L. Poston, chief of staff at the Pacific Command, retired to Sarasota, Fla., this week. CINCPAC said no replacement has been named. Poston flew combat missions in both Korea and Vietnam.

Fred Hoffman of the Associated Press reports that the Army is getting rid of the .45-caliber and .38-caliber pistols in favor of a new 9mm handgun for all services which will use NATO ammunition. The first of the new guns will be delivered to the Coast Guard next year but it will take 10 years to complete the conversion. The Army says the new handgun will be more accurate, weigh less, be safer, have double action firing, less recoil, better reliability and take less time to learn to fire on the range.

Coast Guardsmen here get their paychecks from San Francisco but in 1983 the Coast Guard pay center will be moved from Riverside, Md., to Topeka, Kan.

The Armed Forces

By Lyle Nelson



Three Navy recruiters were nailed for cheating at Middlebury, Vt., and fined \$75 each.

Now in Marine training at San Diego is an all-Navaho platoon. During World War II, Indians were used as "codetalkers." To confuse the Japanese, the Indians relayed combat related messages in their own language to get around eavesdropping intelligence officers.

Gen. Volney F. Warner, head of the U.S. Readiness Command, says he will retire soon because the Army has too many generals and not enough soldiers "to pull the trigger."

Lambert Bos, 84, died in Spokane this week. In World War I action this Marine earned the Distinguished Service Cross, the Navy Cross, the French Croix de Guerre, the Silver Star and the Purple Heart.

When the Army Reserve's 100th/442nd goes to summer camp at Schofield Barracks Sunday there will be 21 men from Guam and 35 from American Samoa.

For the first time in my memory no Navy ship or shore base in Hawaii is in the running for a Ney Award, the prize given to top-notch dining rooms. The local cookies must be out to lunch.

The 25th Division lined up 4,600 troops June 12 at Schofield and they posed for an aerial shot by Army photographer Henry T. Workman. The troops looked

like ants, but such mass group shots were common 60 years ago. Check out the photos in the division's museum at Schofield.

Keisuke Soma, 54, of Tokyo is planning his first visit to Honolulu and would like to find an old friend, Antone Perry. Perry was a soldier in Korea in 1950 who was wounded and who later brought home a Korean bride. Perry lived in Kohala, Big Island, in the 1950s. Persons with information about Perry should call me at the Star-Bulletin.

Also looking for old friends is Maury Zamore who seeks former members of the 77th Division from New York who invaded Guam in July 1944. Call him at 949-7733.

The U.S. Army Overview for fiscal 1982, a statistical booklet put out by the Army Department, says there are 4,000 Soviet troops in Vietnam.

The Disabled American Veterans are upset that the Senate Veterans' Committee took out a provision in the prisoner-of-war bill that would allow the Veterans Administration to presume a service connection for any medical problems former POWs may exhibit years later.

The DAV says President Reagan showed interest in the bill before the election when the DAV figured the bill's provisions would cost \$60 million.

The DAV says that some ex-POWs now are running into some costly medical problems — such as the ex-POW who spent \$2,000 getting his teeth fixed — but the VA will not compensate them.

A 1956 study of Korean POWs reported to Congress that research on the issue was badly needed but it was never carried out. The DAV also believes that any type of neurosis manifested in ex-POWs should be considered service-connected.

On July 1 the functions of the defunct Pacific War Memorial Commission were transferred to the Department of Land and Natural Resources.

Sharks Maligned, Says Zoology Prof

HSB 7/29/81

By Ellen Hole

Gannett News Service

WASHINGTON — Eugenie Clark remembers the time she rode a shark. Rode it. Like a bucking bronco. Afterward, she proudly pointed to the scrapes and scratches on her legs from the wild and woolly ride.

This is an animal to be feared? The monster that terrorized a small town and ate little children and boats in the movie "Jaws"?

Like snakes and lovers, sharks are greatly misunderstood, says Clark, a renowned shark expert. She thinks it's time to stop maligning these sea animals and give them proper respect. Swimming among them is safer than driving on the highway, they're not as dumb as most people think and they're probably more predictable than your husband or wife, she says.

Never mind that researchers just discovered an entirely new kind of shark after it swallowed the anchor of a Navy ship. Or that one type of shark, sweetly called the "cookie-cutter," nearly scared Navy engineers out of their wits because they thought it was some bizarre enemy weapon that was taking those neat round bites of neoprene out of the sonar domes of submarines.

Teeth alone do not a man-eater make, says Clark, who's been studying sharks for 26 years now and is known more often by the label "Shark Lady" than by her real title, professor of zoology at the University of Maryland.

"NO CREATURE ON Earth has a worse, and perhaps less deserved, reputation than the shark," Clark said yesterday during an interview. With the exception of the much-publicized great white shark, which may be becoming extinct, sharks are "normally unaggressive and even timid toward men," she said.

Some of her new findings about sharks, reported in the August issue of National Geographic magazine, dispel many of the old and nasty myths about these creatures, which she calls "magnificent."

For example, of the 350 species of shark now recognized, none normally feeds on humans and only the great white feeds on objects as large as a man. Moreover, shark attacks may be looked upon in the same way that dog bites are: natural responses to strangers invading their territory.

Of the 50 or so serious shark attacks each year, about 10 are fatal. "Most shark attacks are bite-and-release or slashing types of actions

that suggest warnings instead of attempts to kill," Clark said.

Most of the time, sharks feed on smaller fish, mollusks and on crustaceans, sea animals like crabs with a hard shell. A few types aren't predators at all but feed on benign plankton, the tiny plant and animal life that floats around in the ocean.

RECENT RESEARCH has shown, too, that sharks are a lot more sophisticated than anyone thought. They may have one of the "most remarkable" sensory detection systems in all of nature, so sensitive they can detect flounder and other hidden meals buried under sand, said Clark.

In addition, they've been taught tricks like ringing a bell to get food, which indicates that they can learn.

Still, the shark's reputation is not entirely unearned. While most are harmless, you wouldn't want one for a pet. They do have a lot of teeth, a lifetime supply of them in fact, for when one falls out another grows right in. The lemon shark can grow a full set of new teeth in about a week.

And then there is always the great white shark. Clark and a photographer were lowered into the water off the coast of Australia in metal cages to observe these creatures, which are, essentially, fearless. "Nothing scares an excited great white shark," says Clark, who found herself looking right down the gullet of one that tried to eat her cage.

The great white sharks are not as long as the movies would have you think, however, and 25 feet is probably about as big as they get.

BUT CLARK FEARS that these creatures may one day become extinct, as could several other species of shark. People kill the great whites now just for their teeth and jaws, which may bring as much as \$1,000. The underwater nets used to rope off protected bathing beaches trap and kill thousands of sharks and other sea dwellers, some of which already are considered endangered.

She believes the sharks should be awarded protected species status.

"Because we like to swim and dive in an environment unnatural to our species, is it right for us to kill off tens of thousands of harmless residents of that environment to ensure our peace of mind?" she asks.

"We have invented many sports more hazardous than going into the sea. When we kill ourselves at these, we blame no one else and simply accept the risks. But when it comes to sharing the sea, we insist that sharks take all the risks."

Sea World's Great White Dies

fore the results are known. The shark lived 64½ hours.

The 4½-foot fish was pulled in by fisherman Ben Henke after becoming entangled in Henke's gill net off Ventura last Saturday night, and Henke "knew how to handle it," Sea World spokeswoman Jackie O'Connor said.

Sea World specialists went for it Sunday with a truck equipped with a sophisticated shark transport system and oxygenated water.

Sea World kept a great white shark for what it described as a record 86 hours a few years ago, but it had a gaff wound after being caught and died.

SAN DIEGO (AP) — A great white shark described as the only one in captivity died yesterday, less than three days after being pulled out of the sea in a gill net two miles off Ventura.

A spokeswoman at Sea World marine park said the young male was "in good condition until late in the morning when it suddenly went into convulsions."

Attendants got into the 400,000-gallon pool which it shared with several other kinds of sharks and tried to help it swim. Oxygen was given, but to no avail.

A series of tests were being given to determine the cause of death, but it is expected to be several days be-

July 8, 1981 Hono 5-B



Star-Bulletin Photo by John Titchen

Dead Fish on Isle Beaches

Wendy Yamamoto, 7, and Megan Rothschild, 6, investigate some of the dead fish that washed on to the beach at Lanikai yesterday. For the past few days dead fish also have been washing up on the beaches of east Oahu and east Molokai, according to reports from residents and state employees.

The dead fish are balloon fish (*Lagocephalus lagocephalus*), ac-

ording to Kenji Ego, director of the Division of Aquatic Resources in the state Department of Land and Natural Resources.

He said the fish is an oceanic species, ordinarily found on the high seas, and that the kill may have occurred some ways out. He refused to speculate on what may have been the cause, but said it appears to be a biological phenomenon.



Maurice Sullivan
President, Foodland
Supermarket Ltd.

THINK BEFORE YOU SHAKE . . .

The U.S. Department of Agriculture has recently published a pamphlet, "Dietary Guidelines for Americans," in which they warn consumers to avoid the use of excessive amounts of sodium in their diets.

We've all read about salt and its effect on blood pressure. But how can a few shakes from the salt shaker be all that bad? Well, nutritionists say these few shakes

- 15 oz. **219**
- 14 1/2 oz. **89¢**
cans
- 14 1/2 oz. **99¢**
cans
- 13 1/2 oz. **89¢**
cans
- 14 oz. **59¢**
- 12 oz. **159**

Catches One Hawaii Resident

Violations involved the Endangered Species Act, the Lacey Act, the Migratory Bird Treaty Act, federal postal, conspiracy, false statement and narcotics statutes and state laws.

Bartee said rare reptiles are in large demand throughout the United States, but Hawaii doesn't have many collectors because of rigid state laws which prevent the importation of reptiles here.

The service estimates that at least 100,000 snakes are shipped secretly

through the U.S. mails annually. Postal law forbids shipment of snakes, but masking tape is commonly used to muffle the rattles of rattlesnakes.

The wildlife enforcement operation was the largest ever conducted, with more than 200 federal and state wildlife conservation officers participating.

It revealed that hundreds of thousands of U.S. reptiles are taken illegally from the wild each year for a black market with a large portion

smuggled to Europe or Japan, according to information released by the U.S. Fish and Wildlife Service.

The service also cracked down this summer on violations of federal laws protecting the bald eagle.

Bartee and Kim Wright, also a fish and wildlife law enforcement agent in Honolulu, went to Seattle in June to assist about 40 agents in serving 22 arrest warrants and seven search warrants for violations of eagle protection violations after a year's investigation.

A-10 Honolulu Star-Bulletin Friday, August 7, 1981

Wildlife 'Sting' Operation

By Helen Altom
Star-Bulletin Writer

A Hawaii resident was among the more than 175 persons accused of being involved in illegal trafficking of protected and endangered reptiles during a live animal "sting" operation by the U.S. Fish and Wildlife Service.

Prosecution is pending in the local case, according to Jim Bartee, agent with the Fish and Wildlife's Division of Law Enforcement in Honolulu.

Bartee said the local person ordered five lizards from the Atlanta Wildlife Exchange—a sting operation run by Fish and Wildlife agents in Atlanta, Ga., for 18 months.

"He directed the shippers—the law agents—to mislabel the package to indicate that it was perishable sausages to assure its prompt delivery, yet not alert anyone to its true contents," Bartee said.

He said this was a violation of two state laws and one federal law which require wildlife to be marked.

Operating by word-of-mouth among people in the United States who deal in reptiles, the federal agents filled their cages with 10,000 illegal snakes, turtles, lizards and migratory birds during the 18-month period, Bartee said.

He said the defendants were from 35 states, including Hawaii, and evidence was gathered on more than 1,000 counts of violations of state and federal laws.

About 20 persons were arrested July 18 on the Mainland.

Jewelry from Dogs and Boars

WHETHER MIXED or matched, coordinated or contrasted, the well dressed Hawaiian of old Hawai'i wore jewelry to accent the basic Island costume.

For men, the basic costume was the tapa loincloth, a foot wide and 12 feet long.

Draped to give maximum masculine support, then tied around the waist, the two ends could be left hanging for front and back drapes or tucked up out of the way.

For women, the pa'u, a waist-to-knee wraparound, also was adaptable to formal or casual wear.

Jewelry made the difference.

Distinctive bracelets, necklaces, rings and anklets could be mixed or matched at will.

TRUST AN ANCIENT Hawaiian to have good taste and to know what

Teeth were used for bracelets, necklaces and anklets.

was appropriate dress for a given occasion.

There was no Tiffany's to supply chiefs, nor dime stores to supply commoners.

You made what you wore; or won it in battle; or won it in a bet; or received it as a gift; or collected it as a tax; or paid dearly for it in services or goods.

Imagine the impact a canine dog-tooth necklace had at a casual gathering. Each tooth was drilled through its roots and strung on olona or coconut fibers.

Combine this with a bracelet made from human finger bones, and wear an ivory ring, carved in a turtle or shell design, to complete a striking casual costume.

Tales of Old Hawai'i

By
Russ and
Peg Apple



FOR MORE FORMAL WEAR, porpoise teeth, alternated with coconut beads, and a coordinated bracelet created from boar's teeth could be worn.

Boar's teeth were styled in various ways.

They could be bulky full size; or have tips cut off to fit the wrist snugly. Or they could be trimmed so the roots and tips of the teeth would not be exposed. Up to 24 tusks threaded this way could make the bracelet appear solid.

Spectators and participants at sports events showed up in less elaborate ornaments.

Small wood, shell or stone hook-shaped pendants were correct. A string of ivory beads, variously shaped, would not have been *de trop*.

BRACELETS TO COMPLEMENT a casual outfit might be made from turtle plates, strung to appear solid, or the plates might be alternated with tusks or bones, each carved to represent a human head.

Entertainers, especially dancers, sported dog-tooth leggings.

Each was ultimate testimony to its

maker's genius and ingenuity.

Each legging was assembled from 500 or more selected canine teeth—from more than 125 dogs—in a difficult and complicated design. Each gaiter measured about eight inches from top to bottom and boasted about 20 rows of teeth.

TEETH POINTS faced away from the skin to prevent discomfort while dancing. Smaller canines were laced across the top row; largest across the bottom row.

The rhythmic, bamboo-chime-like sound of the dancer's legs delighted entertainment-goers.

No high chief's formal wardrobe was complete without the *lei niho palsaos*. This priceless heirloom was an ivory, broken-cup-handle shaped pendant suspended from looped banks of human hair.

Later, as times changed with foreign contact, copies of heirloom *lei niho palsaos* were hung from ivory or red-glass beads.

By the 1800s, ornaments were limitless in originality.

Worn about the neck of those fortunate or wealthy enough to own them were combs, small mirrors, knives and tobacco pipes.



A boar-tusk bracelet

Giant African Snails Bring

By Harry Whitten
Star-Bulletin Writer

Reports have been received from American Samoa that giant African snails are being killed by the millions but that too many of them remain.

The disease-carrying garden pest has caused at least 40 cases of eosinophilic meningitis and is blamed for one death there.

The snail's responsibility for introduction of the serious disease to Samoa is subject of an article in the October issue of the Hawaii Medical Journal.

The article says humans most frequently contract the disease by eating raw or improperly cooked snails or freshwater prawns. Dr. Joseph E. Alicata of Honolulu, one of the co-authors, emphasizes the importance of proper cooking of mollusks or freshwater prawns and washing of vegetables intended to be eaten raw.

Alicata, parasitologist emeritus at the University of Hawaii, has studied and written about the role of the giant African snail, *Achatina fulica*, in dispersal of the parasite rat lungworm (*Angiostrongylus cantonensis*), which is recognized as the primary cause of the disease.

His studies, done in the 1960s and 1970s, were made in Tahiti, the Cook Islands and other Pacific islands, and in Southeast Asia.

The disease was blamed for the death last summer of a Korean fish-

erman who ate uncooked African snails in American Samoa.

THE AFRICAN snail has also caused much loss to Samoan vegetable farmers by eating voraciously on such crops as lettuce and cabbage, according to Po-yung Lai, chief of the plant pest control branch, state Department of Agriculture.

Lai and Larry Nakahara, entomologist, visited American Samoa late last summer to evaluate and give recommendations on snail control.

Up to the end of August, 40 meningitis cases had been recorded, Lai said. He thinks the public health issue is most important in seeking control of the snail.

The African snail is believed to have reached American Samoa in 1975. The government has sponsored three major campaigns to reduce snail populations by collecting them by hand, Lai said.

In 1977 one million snails were collected in three campaigns. In an eight-week period which started in June this year, CETA workers collected approximately 135 tons, or about 5.4 million snails.

Then, in a third effort that started Sept. 2 and lasted six weeks, approximately 21 million snails were collected, for which the Samoan government paid \$59,000 in bounty funds.

Lai said he was told that the snails were crushed and that the plan was

to use them for pig feed, after being well cooked.

IN ADDITION, homeowners were setting out chemical bait, with the result that thousands of empty shells could be seen around their homes.

In their recommendations, Lai and Nakahara suggested an integrated approach, based on biological controls. They said that release of *Euglandina rosea*, a parasitic snail well-known in Hawaii, should be discontinued for the time being, but that release of another parasitic snail, *Gonaxis quadrilateris*, should be continued.

Biologists have blamed the *Euglandina*, brought to Hawaii from Florida, with wrecking havoc on Hawaii's native tree snail, of the genus

Trouble to American Samoa

Achatinella, and said it might also destroy Samoa's eight species of endemic snails.

Lai and Nakahara also recommended evaluation of the control programs, surveillance of uninfected areas, and monitoring of the meningitis problem.

The death from meningitis occurred last summer when two boatloads of Korean fishermen docked at Pago Pago and someone brought them a large basket of giant African snails.

Of the 25 to 30 men in the two crews, half ate the snails raw while the other half ate them only after they had been thoroughly or partially boiled. The fishermen were unfamiliar with the danger as they were used to eating raw mollusks in Korea.

EVERY ONE OF the men who ate the raw snails became severely ill, with meningitis symptoms, and one young man died after being in a respirator for two weeks.

The other 14 patients were evacuated to South Korea, where it was reported they had difficult recoveries, but there were no more deaths.

The Hawaii Medical Journal article said that the disease eosinophilic meningitis is manifested by headache, stiffness of the neck, pricking or tingling in various areas of the body, and eosinophilia in the cerebrospinal fluid. Eosinophilia refers to an abnormal increase in granules in the blood.

Raw or improperly cooked fresh-

water prawns or snails serve as intermediate hosts for the rat lungworm, a new parasitic disease of man in Samoa.

THE DISEASE has previously been reported from the Caroline Islands, Cook Islands, Hawaii, New Caledonia, New Hebrides, Philippines, Society Islands, Sumatra, Taiwan, Thailand and Vietnam.

The first case of eosinophilic meningitis was observed in Pago Pago in August 1979, the article says. Case histories of patients with the disease were given.

The article said that the causative parasite, rat lungworm, is now well-established among the rat population, as well as vectors such as snails, slugs and freshwater prawns.

27 JANUARY 1981

Honolulu Star-Bulletin

Leptospirosis Is Hazard in Aquaculture Industry

By Bruce Dunford
Associated Press Writer

As the state and private firms both pursue expansion of Hawaii's aquaculture industry, the state Health Department has turned up one apparent occupational hazard which has proved deadly.

The culprit is a microorganism known as leptospirosis, a member of the bacteria family identified in the deaths of three prawn farmers in Hawaii during the past two years.

The health department stepped up investigations of the leptospirosis problem two years ago after the first suspected fatality from the disease—a 64-year old man who frequently swam in the Kalihwai River on Kauai.

Dr. Ned H. Wiebenga, state epidemiologist, said about 10 to 30 cases of leptospirosis are identified each year in Hawaii. The backgrounds of the cases are mixed, he said, but people in aquaculture or taro-growing activities appear especially susceptible.

PERSONS EATING home-grown freshwater fish aren't likely to contract the disease because the fish are cooked.

But frequent contact with waters containing the bacteria is believed to be a factor in human cases.

The leptospirosis is a spiral-shaped organism that strongly resembles a syphilis organism and is found in dogs and cats but with the rat being the No. 1 host animal, Wiebenga said.

The organism apparently enters the fresh water aquaculture ponds from urine of the rats which have been found burrowing in the pond walls, he said.

The organism then enters the human host by boring into the skin through a break or wound while the person is wading in the water, he said.

Wiebenga said he suspects the leptospirosis is present in most fresh water streams in the Islands and was probably introduced in the Is-

Turn to Page A-2, Col. 1

Leptospirosis Is a Hazard Here

Continued from Page One

lands with the first arrival of the rats.

The disease is clinically hard to diagnose unless the doctor knows what he is looking for or keeps leptospirosis in mind as a possible cause of an otherwise unexplainable symptom, Wiebenga said.

Treatment is relatively simple with antibiotics, he said.

AS FOR COMBATING the disease, Wiebenga said the Health Department is working on two fronts—one to rid the prawn farm ponds of rats and the other to take blood tests of the prawn farm workers to expedite diagnosis.

Symptoms of the disease, Wiebenga said, vary from case to case. Sometimes it's a jaundice condition or possibly an unexplained fever. Other times, he said, it might be a rash or a headache.

Health officials are particularly concerned about the disease because of its fatal consequences, not only to people but to the state's expanding aquaculture industry.

The subject of leptospirosis came up yesterday as Wiebenga gave the state House Finance Committee a report on Health Department's budget requests related to communicable diseases.

Pandas and Whales? Crabs and Wasps?

Some Life Forms Are Facing Sacrifice

By Boyard Webster
N.Y. Times Service

NEW YORK — Which of earth's many endangered life forms will survive, and which will disappear forever?

No one knows for sure, but some concerned scientists who have been studying this problem, and expect that man will play a pivotal role in determining which forms will continue, now advocate the use of triage — a concept known and dreaded in wartime.

Triage, as practiced by medical officers on the battlefield, ranks wounded soldiers according to their chances for survival. Treatment is given to those whose chances are best, leaving the rest to survive or not as fate may decide.

As applied to endangered animals and plants, triage would presumably channel care, funds and research to those to be preserved, not only on the basis of species, genus or family "saveability," but also on the extent of its importance to the earth's biota. Such a comprehensive procedure is being studied by naturalists around the world in a project sponsored and financed by the World Wildlife Fund-U.S., which has its headquarters in Washington.

The project will attempt to answer potentially poignant questions such as: Should such appealing creatures as giant pandas, whales and the more spectacular birds be given priority over less glamorous but beneficial invertebrate species such as crabs and wasps? Should the

the world's invertebrates, mammals and birds before many more valuable and beneficial species are lost because of their indiscriminate elimination by man.

Thousands of the earth's 5 million to 10 million species of plants and animals have become extinct, mostly in recent times. These include families or groups of species such as lemurs, Australian marsupials, moles, birds and plants.

The primary cause of most of these extirpations is generally considered to be the pressures of a growing human population as it expands into habitats that had been the exclusive domain of plants and animals.

SOME 25 percent of the world's forests, mostly in equatorial areas where they contain the majority of the world's existing species, have been destroyed. And the Federal Council on Environmental Quality, in its recent report Global 2000, expects a net reduction of 40 percent of the world's forests by the end of the next two decades, with a resultant loss of a million species.

Dr. Norman Myers, a wildlife ecologist and conservation consultant based in Nairobi, Kenya, is heading the Wildlife Fund's project to devise the methodology for a comparative evaluation between different species and groups of species.

A preliminary summary of the triage project by Myers was published in a recent issue of the World Environment Report, a journal of the World Environment Center, an agency of the United Nations.

large cats, the great apes, seals and certain groups of trees and plants. And such a concentration tends to ignore the other 90 percent of species that are haphazardly deemed insufficiently worthy of preservation efforts, the researcher said.

Myers is traveling to many wildlife areas around the world and talking to experts in the field who can help devise a preliminary outline for a system by which priorities can be established.

HOPING TO complete his study in the next several months, he feels that there are four main wildlife values that must be determined before arriving at priority rankings. These include:

- Biological: the general ecological, biological and genetic values, and the uniqueness, of the species.
- Economic: the species' agricultural, medical and industrial worth.
- Cultural and esthetic values.
- The special values of the ecosystem the species inhabits.

Other organizations are also trying to arrive at a system whereby funds and efforts for preservation of species can be allocated by priority.

The United States Office of Endangered Species has already instituted a point system, whereby species are considered for listing according to the amount of data available on them and whether they are subject to "greatest," "medium" or "least" threat.

The World Conservation Strategy, a recent study prepared by the

International Union for the Conservation of Nature and Natural Resources, the United Nations Environment Program and the World Wildlife Fund, also offers a rough plan for establishing priority requirements for preserving needed species.

IT ASSIGNS priorities according to the imminence of loss and whether just one species or a family of species is endangered, giving the highest priority to threatened families or genera.

"We're going to have to make some very tough decisions," Myers said, noting that species judged to be of little value today might turn out to be of front-rank value tomorrow.

As an example, he noted that the formerly ill-regarded Monterey pine, once reduced to a few square miles of habitat, is now the most widespread industrial timber tree in the Southern Hemisphere.

"Why should man worry about the creepy, crawly insects of the tropical forests?" he asked rhetorically. "Because the Amazonian rain forests have supplied the wasps that prey on many plant pests in Florida; because other tropical forest insects have helped develop drugs for the treatment of heart disease and cancer; and because a species of African butterflies has provided clues to the genetics of the Rh factor," he said, adding that only a small portion of the area's species has been identified so far, leaving many unknown but threatened species that might be of benefit to man.

Pandas and Whales? Crabs and Wasps Some Life Forms A

By Bayard Webster

© N.Y. Times Service

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The project will attempt to answer potentially poignant questions such as: Should such appealing creatures as giant pandas, whales and the more spectacular birds be given priority over less glamorous but beneficial invertebrate species such as crabs and wasps? Should the graceful Mississippi sandhill crane be given preference over the grotesque but unique Gila monster?

THE PROJECT stems from an idea first posed by Dr. Thomas E. Lovejoy, the Wildlife Fund's vice president for science and coordinator of the study.

"We're already on the threshold of mass extinction of many species," he said, "and I thought there ought to be a system that would give us a conscious choice in choosing to save one species over another."

Triage, stemming from the French verb "trier" — to sort out — was a method used to save some of the wounded French soldiers in World War I when there were not enough medical corps units to cope with the tremendous number of casualties.

Many wildlife experts believe that some form of environmental triage must be put into practice soon for

the world's invertebrates, mammals and birds before many more valuable and beneficial species are lost because of their indiscriminate elimination by man.

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A preliminary summary of the triage project by Myers was published in a recent issue of the World Environment Report, a journal of the World Environment Center, an agency of the United Nations Association of the United States.

"We're already unwittingly practicing triage on wildlife whether we like it or not," Myers said on a recent visit to New York. "When the decision was made to spend three million dollars to save the California condor, some other species will have to go by default — there's not enough money to save everything. Not that the condor shouldn't be saved."

HE NOTED that conservationists, because of limited means, can usually allocate their resources and priorities only to a particular species in preference to others. But there is little scientific evaluation in their determination of such priorities, he said.

As a result, the focus is on species that are threatened and that have a good measure of public appeal. Such species include the tiger and other

Awa to Be Fattened in Mokauea Fishpond

By Harry Whitten
Star-Bulletin Writer

The first Hawaiian fishpond built on Oahu in the last 200 years received its first awa (milkfish) yesterday as excited volunteers on the Mokauea Fishpond Project watched.

The release of several hundred juvenile awa was made into the 'auwai, or ditch, leading into the pond, following a chant by Kaupena Wong, expressing a Hawaiian heritage blessing.

The fish, about eight inches long, swam immediately into the light green and nutritious waters of the pond that will be their home until they reach a size appropriate for harvesting and eating. Awa will grow to 35 or 40 pounds.

The two-acre pond was dredged out in 1979 on Mokauea, site of a Hawaiian fishing village, in Keelhi La-

goon. The village, whose existence goes back to the early 1800s, is now being transformed in a project that will result in 14 new dwellings to replace the weather-beaten shacks in which fishermen families have lived for some years.

THE NEW HOUSES that will be occupied by the Alejandro Romo family and by Kalliko and Jared Pu'u and their family are nearing completion.

Yesterday Kalliko Pu'u, mother of 10 children, recalled the time when she was a small girl, visiting her grandparents who lived on Mokauea.

John Kelly, project adviser and member of the Mokauea Fishermen's Association, said that awa provides more fish protein than any other fish in the world, being extensively cultivated in ponds in the Philippines, Southeast Asia and other tropical areas.

So far no one has found a way to get awa to reproduce in captivity, so it is necessary to catch young fish for stocking ponds. The fish released yesterday in the Mokauea pond had been captured in estuaries and transported in a tank placed on a truck sent from the Oceanic Institute.



AWA FOR POND—Awa are dumped into the 'auwai (ditch) leading into the Mokauea fishpond. —Star-Bulletin Photo by Terry Luke.

Later, at the end of the present mullet spawning season, pua 'ama'ama (juvenile mullet) will be placed in the pond. Tilapia, an undesirable fish, are already there.

During the last eight months University of Hawaii students in the marine option program have been building the inlet ('auwai), five feet wide and about 80 feet long that connects the pond with Keelhi Lagoon.

A makaha, or gate, keeps the fish in the pond. The water flowing in and out of the pond, with the tides, assures enough oxygen to keep the fish healthy, Kelly said.

MEMBERS OF the Mokauea Fishpond Project will monitor the pond's environment and fish growth from stocking through harvest. Later Mokauea residents will take over operation of the pond completely.

About 360 fishponds existed, 100 of them on Oahu, before the arrival of Capt. James Cook and his successors. Most have since been destroyed or fallen into neglect.

The ancestors of the present-day Hawaiians learned that by selectively developing the milkfish and mullet in ponds, the food chain was made 100 times more productive.

The Mokauea pond, which is expected to be observed by aquaculturists, students of Hawaii-ana, school classes, and community groups, has received volunteer help from a large number of sources.

Funding for the Mokauea Fishpond Project came from the university's Sea Grant Program, Office of Marine Affairs Coordinator, and the aquaculture development program in the state Department of Planning and Economic Development.

The Mana of Island Chiefs

KAMEHAMEHA THE GREAT believed in mana. So did just about everybody else in Hawai'i during the 1,300 years or so before he died in 1819.

Some Hawaiians, along with many other Polynesians and non-Polynesians, still believe in mana.

Because Kamehameha believed his sacred wife Ke-opu-o-lani possessed more mana than he himself did, he crawled on his hands and knees when he visited her.

He came to her, not she to him.

Kamehameha, by the rules associated with mana, kept his head on a plane lower than hers. She probably was not his favorite sleeping companion.

He had other wives, of course. They had less mana.

HIS SONS by Ke-opu-o-lani also were more sacred than himself, Kamehameha believed. When one approached, he prostrated himself—again to keep his head lower than his son's.

Mana is best thought of as inherited spiritual power. People and ob-

A comparison with radiation.

jects with mana had various degrees of sacredness.

Mana originated with the founding Polynesian gods 3,000 or so years ago. Founding god Waka and founding goddess Papa passed mana along to their earthly descendants, the first Polynesian chiefs.

Generation after generation of chiefs passed it along through inheritance.

FROM NEW ZEALAND north to Hawai'i, from Easter Island west to Tonga, Polynesian chiefs possessed mana. Those who were without it were commoners.

Hawaiians treated mana in practice as modern day scientists treat radioactive materials.

The source of mana—and of radioactive energy—is dangerous. The closer you get to the source, danger increases.

Commoners stayed away from chiefs. It was dangerous to approach them.

Chiefs radiated spiritual power—mana.

Thus, each chief had a radiation

Tales of Old Hawai'i

By Russ Apple



field. The more mana a chief had, the more extensive his radiation field. A lesser chief, one without a high degree of mana, could be approached closer than a high chief.

FOR THE RULES of the behavior toward the sources, the comparison of mana with radioactive energy begins to break down. Hawaiians and scientists followed different rules.

In Hawaii, when a chief drew close there were rules which depended on the degree of mana the chief possessed.

When a lesser chief approached, a commoner could remain respectfully standing.

For a chief with a fair degree of mana the commoner squatted or sat to keep his head lower than the chief's. This was called the *kapu nobo*.

FOR A HIGH CHIEF, a commoner prostrated himself. So did some middle-grade chiefs, as Kamehameha did for his more sacred son Liholiho. This was the *kapu moe*.

Hawaiians also were practical: some chiefs inherited a type of mana which permitted them to remain standing, and thus serve in an upright position and move about as needed, in the presence of a high chief with the *kapu moe*. This right to remain standing while others must prostrate themselves was the *kapu wahi*.

Most of the *kapu wahi* chiefs also had inherited the *kapu nobo*, so that others when they came close to them performed the sitting *kapu*.

All chiefs with the *kapu nobo*, and all chiefs with the *kapu moe*, of course, associated within their respective degrees without deference to each other.

Now comes the concept that mana also was like magnetism—things that high and lesser chiefs wore, touched or walked upon absorbed some of the mana and became sacred in their own right.

Thus, objects also radiated mana.

Growing Pumpkins for Bait

MAUNALEI'S HANDS hadn't worked the sandy soil for 52 years, but it gave him pleasure to let the dirt run through his fingers as he recalled the fine pumpkins he once grew in it.

In the 1920s, when Augustine Kekaikumahikina Maunalei was a boy, he grew pumpkins for his family. It was one of his chores in the dry, hot, windy coastal area of Waiahukini, near South Point on the Big Island.

Waiahukini is deserted now. In the 1920s, four or five families lived there permanently.

The top fisherman at Waiahukini was Maunalei's father, also called Maunalei.

Maunalei Sr. was a professional fisherman who used an outrigger canoe with fishing knowledge and techniques handed down in his family for generations at Waiahukini.

You might even call Maunalei Sr. a commercial fisherman, for he

Pumpkins were grown as bait for 'opelu.

worked for the trader Shimizu, a storekeeper at Na'alehu. Mules, horses or donkeys packed the fish inland from Waiahukini to the road, where Shimizu took delivery in his Model T. Shimizu then sold the fish house to house in the South Point communities of Wai'ohinu, Na'alehu, Honu'apo and Hilea.

Maunalei Jr., of course, helped pack the fish uphill to the road.

BACK TO THE PUMPKINS Maunalei grew in the sandy soil near the few houses on the beach at Waiahukini.

Pumpkins there had two uses — for food, but more importantly for chum (bait) for 'opelu, a mackerel

Tales of Old Hawai'i

By
Russ and
Peg Apple



scad. 'Opelu schooled in the waters off Waiahukini.

Maunalei's father had a trained school of 'opelu which he fed regularly at the same spot in the ocean over the years.

Yes, 'opelu was one of the fish regularly delivered to Shimizu.

Maunalei's ancestors had learned that the pumpkin brought to Hawai'i by foreigners made good 'opelu chum if properly prepared. Waiahukini was unpromising land for horticulture, but Maunalei's ancestors had worked out the techniques for growing it.

His mother started the plants from seed. She packed sand into about eight cans, and pushed two seeds into each can. Rain water — hauled down from Na'alehu — watered the plants until they were four inches high.

Meanwhile, Maunalei Jr. made about 16 circular piles of rocks, one for each plant expected. Each pile had perhaps 20 fist-size rocks in it, and stayed in position on the spots selected for planting. The shade and shelter each pile gave prepared the soil by trapping moisture.

WHEN THE PLANTS were four

inches high and able to withstand Waiahukini's hot, dry and windy weather, each rock pile was changed into a sheltering circle of rocks with an open center. A plant went into each center.

Watering continued until the plant vined. It was then on its own except for training.

Once the plant vined, the circular border of rocks was removed. This was to keep the vine on the ground.

Maunalei Jr. did not toss the rocks away. Each rock was laid on top of the vine someplace — often on top of leaves — to cause roots to grow under each rock.

Pili, a grass, was spread over the entire area as mulch to conserve moisture.

If Maunalei Sr., as head fisherman in consultation with the other fishermen, decided that pumpkin was to be the type of chum used that day, Maunalei Jr. went to work at 6 a.m.

He quartered the selected pumpkin, removed the seeds and peeled. He grated the meat.

Cooking was done in a five-gallon can. Six to eight cups of brackish water per pumpkin were added to the grated pulp — always plus one cup of water "for the fire." Cooking time was several hours over a slow fire.

Overcooking was the goal.

THEN CAME the cooling. This was done by stirring for hours with a tree branch, a pick handle or a long stick. The object was to stir the bottom up to the surface where it could lose some heat.

Maunalei Jr. said it had to be cool enough to thrust your hand into the mixture before his father would accept it.

Pumpkin chum was usually ready for use in the early afternoon.

FORUM

the Readers' Page

A Particular Point of View

Wednesday, April 26, 1978 Honolulu Star-Bulletin A-13

Visit to Fishing Village off Oahu

By Peggy Hickok Hodge

A FASCINATING fleeting glance at Mokauea Island, a part of ancient Hawaii, was afforded 27 members and guests of the Hawaii Audubon Society recently.

They were escorted by John Kelly, adviser for the Mokauea Fishermen's Association, and his wife, Marion Kelly, a teacher of ethnic studies at the University of Hawaii.

Also along as a resource person was Ron Walker, chief of the wildlife section, State Division of Fish and Game.

Presently a 65-year lease is being granted by the state to the Mokauea Fishermen's Association. This, however, has to be affirmed by the Federal Aviation Administration, since both Mokauea island and Keehi Lagoon lie within the jurisdiction area of Honolulu's International Airport.

Mokauea island was formerly an active fishing village and is of vital concern today to the U.S. Fish and Wildlife Service because of the bird life in the swamps near the island.

Birds and a few people live on Mokauea Island, near the southern entrance to Honolulu Harbor.



Joe Kukiiki, with Rosalie Anne Romo, 2. In background beneath grass-roofed shelter is the ancient Hawaiian canoe.

especially the endangered Hawaiian stilt or ae'ō.

Therefore, the Department of the Interior has a special interest in the outcome of the Island with its present families living on Mokauea permanently.

THE TRIP was especially planned, not only to see the birds present in the mangrove swamp beyond Mokauea, but to hear Kelly's interpretation of why the present occupants will actually help to preserve the endangered bird life nearby.

Mokauea Village lies 1,000 feet offshore by boat from Sand Island on the southern entrance to Honobulu Harbor.

According to spokesman Kelly, Mokauea Village will stabilize and help to protect the bird feeding area for the native stilt and other water birds.

Without Mokauea Fishing Village occupied by people also concerned in preserving the wildlife, users of nearby Keehi Lagoon, including water skiers, power boat racers and casual fishermen might frighten away many of the birds and the area would be without supervision.

ONLY FIVE families now live permanently on Mokauea in seven slightly shabby but rustically attractive rebuilt houses. Under the state lease being drawn up, and which must be in concurrence with the

FAA, no more than a maximum of 14 families will be permitted to live on the island to avoid overpopulation.

Today the inhabitants of the island are a mixed group but mostly part-Hawaiian. Many have lived there in the Hawaiian life style for 35 years. The occupants are also of Japanese and Filipino descent.

The only small child on the island is wide-eyed 2-year-old Rosalie Anne Romo, daughter of the Altjandro Romos, who charmed the visitors with her pierced earrings and fetching smile.

I ENJOYED talking with Joe Kukiiki, who has lived on Mokauea since 1924 and remembers walking across from Sand Island in low tide as a child to go fishing with his dad. They would use washtubs tied together to haul things from the Mainland.

He also recalls how strict his father was in teaching his children to respect the precious wild life.

During the war the island residents were removed for safety but returned at the end of the war in 1945.

The history of the island is fascinating and a vital part of true Hawaiiana, Kelly said. In the un-

written literature of Hawaii there is a legend which tells of migratory landings of Polynesians on Mokauea Island as early as the 12th century.

According to state historian Nathan Oppenheimer (of Hawaiian descent) a detailed study of Mokauea Village shows it to be an area of important historic concern.

This subsistence fishing village is the only one of its kind on Oahu and one of only two in all Hawaii. Kelly said hundreds of such villages once thrived, with their heritage of the sea in ancient Hawaii.

HABITATION BY Hawaiians was definitely known on this island 160 years ago as shown on the 1817 map of the Kotzebue expedition. Kelly told the visitors.

An ancient Hawaiian canoe on display on the island shows it was handmade of kōa with ancient tools.

If one could close one's eyes to what was almost completely ruined by the ravages of the senseless dredging of World War II and the debris scattered for many years on Sand Island, one could imagine the days of old Hawaii, Kelly said.

Fishing is still successful off the ocean side of Mokauea, according to old time residents, who catch mullet, reef and rock fish and ulua.

Today the remaining seven houses look lonely on the little island, a blob of sand in a sea surrounding it. Former homes were unfortunately burned two years ago during a confrontation with the State Department of Transportation, Kelly said.

BUT TODAY life still exists in a very different manner from homes across the way on Oahu proper. Planters are creatively fashioned by these fisher people out of washed up rubber tires, in which are growing herbs and portulaca, ginger, pikake, colorful chili peppers for cooking and even dry land taro!

Beyond the island we could see the wildlife parading among the distant clumps of mangrove trees. There were the lonely wandering tattlers or 'ulili, plovers or kolea, who valiantly fly some 3,000 non-stop miles from their Arctic homes to winter here each year; the turnstones or 'akekeke, sanderlings or huna kai in flashing white poking along the brown silty mudflats, a few Hawaiian stilts and brown boobies in the far distant swamps, plus a visiting jaeger.

It was an enlightening visit for most of us who had never before been privileged to visit an authentic Hawaiian fishing village.

Kono: Hawaii Can't Depend on Tourism

By Debra Whitefield
Star-Bulletin Writer

Hawaii doesn't "have much choice" but to rely on small, undeveloped industries such as aquaculture, fishing, film making and energy to supply future jobs. Hideto Kono, state planning and economic development director, said yesterday.



Hideto Kono

Tourism can't be expected to keep growing at its current phenomenal rate, and "we must be careful about its growth," Kono warned.

Therefore, "we need to stress every opportunity" for growth in other fields, he said. "All these little things will contribute."

A story in the Thursday Star-Bulletin quoted economists, businessmen, and state planners as saying that the state's employment outlook for the immediate future appears bleak.

MANY EXPRESSED concern that unemployment will only worsen.

The Ariyoshi administration's plan for future jobs does little to alleviate that concern, many of those interviewed said, because it relies too heavily on industries that aren't labor intensive, such as aquaculture.

The state's own forecasts estimate that aquaculture will create only 44 direct and 108 indirect jobs over the next two years. Even by the year 2000 the state predicts, private aquaculture businesses will have created a total of just 2,808 direct jobs and 6,217 indirect jobs.

Kono points out that those are just estimates. And judging by the rate of growth of aquaculture in the last year, he said, they're probably conservative estimates.

BUT HE ACKNOWLEDGES that there has been an overstress on aquaculture. "Actually, the state is just as optimistic about the job-creating potential of the energy, communications, fishing and film-making industries," Kono said.

As Hawaii gains strength as a Pacific crossroads, there will be additional jobs for experts of all types, he said.

As job-creators, none of those are of tourism's magnitude, he acknowledges. But combined, they eventually will provide a sizeable number of new jobs, Kono said.

Besides, "we don't have much choice," Kono said.

What's most important, the planning director said, is for people to understand that the state's role in creating new jobs is only as a "catalyst for private industry."

"We're not going to supply these jobs," Kono said. "Private industry is."

State Land Board Names Chief of Enforcement

Maurice M. Matsuzaki has been appointed director of the Division of Conservation and Resources Enforcement, Susumu Ono, chairman of the Board of Land and Natural Resources, has announced.

Ono said increased emphasis is being given to the responsibilities of the division, established only a year ago.

The division has the responsibility of enforcing all regulations in the state Department of Land and Natural Resources, including fishing and hunting laws and forestry, state parks, conservation district, and land management rules.

Some of the division's responsibilities used to be performed by game wardens and forest rangers.

THE DIVISION has 39 enforcement officers now and will have 46 when it is at full strength. It has also been recruiting 64 volunteer enforce-

ment officers for duty in the state's four counties.

Matsuzaki, 40, was with the Honolulu Police Department for seven years and has spent the last 12 years with the DLNR as game warden and fish and wildlife enforcement officer with the Fish and Game Division. (2)

He said much emphasis will be placed on the education aspects of conserving natural resources and on work with the public.

A public information officer, Bruce Bikle, has been hired, with help of federal funding through the Coastal Zone Management program, he said.

Stress is also being given on training of both regular officers and volunteers, he said.

Noah Pekelo Jr., acting chief of support services, is working up the training program with assistance from Bikle and Harold Moraes, a supervisor.

Hunting, Fishing Safety Funds Available from U.S. Agency

More than \$780,000 in federal funds is available for sport fish and wildlife restoration and hunter safety programs in Hawaii during fiscal 1980, the U.S. Fish and Wildlife Service has announced.

The funds are available on a matching basis, 75 percent federal to 25 percent state. Sometimes the

state hasn't been able to take full advantage of the federal funds available, according to Dale Coggeshall, the service's Hawaii area administrator.

Of the total, \$388,560 is for wildlife restoration and \$112,880 for hunter safety.

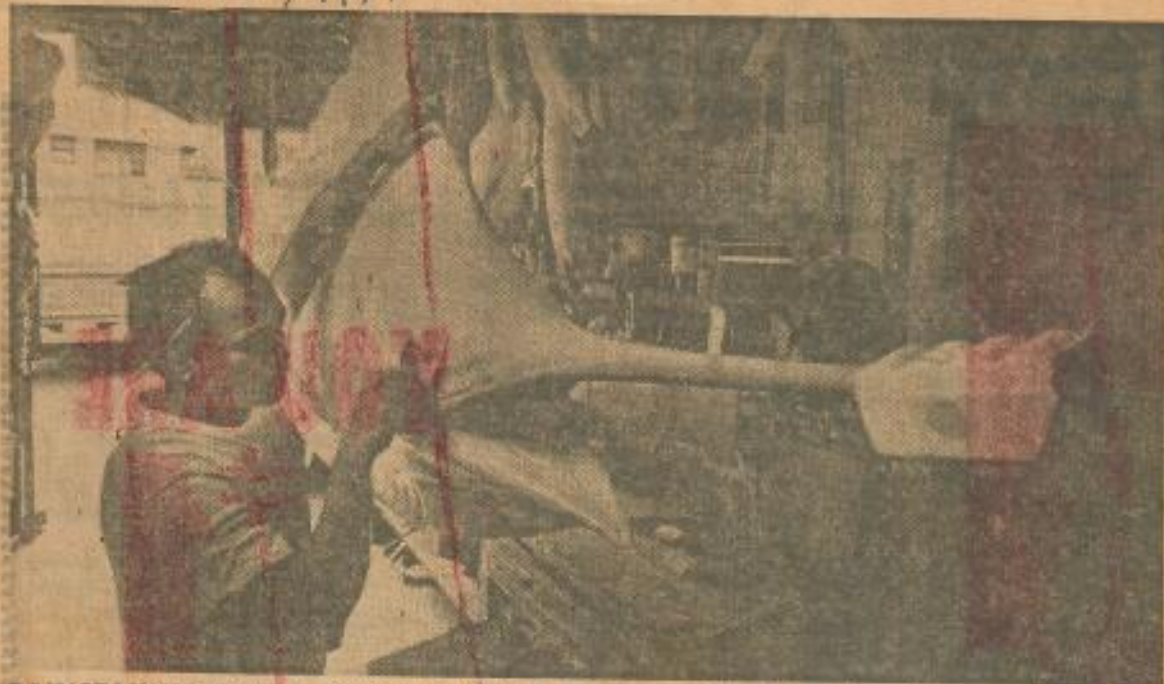
The wildlife restoration funds are used for projects to benefit game wildlife, management of the hunting season, facilities to aid hunters, study of wild animals, and some projects of benefit to non-game animals or endangered species, according to Ronald Walker, Wildlife Branch chief, state Department of Land and Natural Resources.

THE HUNTER safety programs will be for a new program started this year with emphasis on handling firearms and educating young hunters, Walker said.

The funds are derived from an excise tax on sporting arms and ammunition.

The total includes \$280,000 for fish restoration projects. These include survey work in the Northwest Hawaiian Islands, fish aggregation work, fisheries surveys, and projects to aid freshwater recreational fishing, according to Kenji Ego, director of the state Fish and Game Division.

Fish restoration funds come from an excise tax on fishing rods, creels and artificial baits and lures.



PAINSTAKING CRAFT—Taxidermist Jordan Lee demonstrates the painstaking art of his craft as he puts the final touches on a marlin in his Kapahulu shop. After chemically treating the fish's skin, Lee stretches it over a molded plaster body. The fish's bill is protected by a piece of foam.—Star-Bulletin Photo By Bob Young.

You Can 'Stuff' It

By Jack Wyatt
Star-Bulletin Writer

Kapahulubusinessman Jordan Lee will probably stuff more birds this month than most homemakers will stuff in a lifetime.

No, Lee doesn't go around inserting bread crumbs in Thanksgiving turkeys. Lee is a taxidermist and he happens to be the leading stuffer of game birds, fish and animals in Hawaii.

Lee, 46, who took over the George Lee Taxidermy business from his father several years ago, explained how it all began.

"MY DAD, George Sr., my two brothers and I grew up hunting in the Islands. We use to fool around with stuffing our own game. But it wasn't long before our friends began asking us to mount their trophies. Pretty soon, our taxidermy hobby outgrew my mother's flower shop," he said.

through. Once the skin gets beat up or old, it can be a lot of extra work for us. Without a good skin we can do nothing."

The skin is then rolled and air-dried and left to cure for about two weeks. Later it's placed in a borax solution for about a month to remove any excess oil.

"FOR BIG fish, like marlin and mahimahi, we make a plaster body from the mold and stretch the tured skin over it," Lee explained, "but for smaller fish, we lay the skin inside the mold and cast the body on top of it.

"We always use the original skin, fins and tail whenever practical. (The eyes are made of glass and are supplied from the Mainland.) But some fish come to us in such poor condition that there is a tremendous amount of reconstruction required."

takes a lot of patience to get them to look natural."

LEE ALSO stuffed the giant 1,805-pound marlin that was caught from Cornelius Choy's Coreene-C about seven years ago. "We didn't have a table strong enough for that monster," he recalled. "We finally ended up casting the mold on the floor. The marlin is now displayed at the International Market Place in Waikiki."

Upstairs, Lee's son, Jordan Jr., 23, was busy skinning a boar's head. "All that fat has to be removed," said the young apprentice's father. "It takes a lot of cleaning and curing, but the skin is everything. We keep it as original as possible. You bring us a bald-headed pig for mounting and you'll get a bald pig in return."

Other popular Island game mounted by Lee are sheep, goat and deer.

For game birds, foam, instead of plaster, is used for stuffing. "All the original skin and feathers are kept intact," Lee emphasized. "Birds take painstaking work, but they usually turn out beautiful—particularly the colorful pheasants."

According to Lee, fish are at their most brilliant color during the excitement of the fight.

"Their brilliance begins to fade from the moment they die," he said. "I use a small spray gun and touch-up paint to restore all fish to their natural color and great care is also taken to reproduce any unusual markings. Taxidermy takes great patience."

"Now I run the Hawaii business and my dad and my brothers, Gordon and George Jr., operate the Mainland shop at Costa Mesa, Calif. They specialize in fish and have become one of the best-known taxidermists in the country. Our shop at Kapahulu mounts all game."

What happens when an angler brings in a fish for mounting? "The main thing is to get started on it right away," said Lee. "First we take its measurements and then we make a plaster mold and remove the skin. If customers bring in 10 fish, that means my crew and I will work straight

Hanging from the ceiling of Lee's modern two-story plant are dozens of Hawaiian gamefish in various stages of completion. "That's a customer's 600-pound marlin that we're holding," said Lee, pointing to a beautiful blue-gray specimen. "But billfish from 20 to 40 pounds seem to be the most popular size for mounting. They have nice shape and will fit almost any wall." Fish taxidermy costs from \$85 and up.

Lee has mounted all sizes and types of fish. "Here is a little three-pound broadbill that is about the smallest fish of that type that I have worked on," he said. "Small fish are often the most difficult. It

Kahuna Says He'll Go Ahead Anyway

Marines Ban Makahiki

By Nadine W. Scott
Star-Bulletin Writer

Tentative approval for a Hawaiian religious festival this weekend at Kaneohe Marine Corps Air Station has been withdrawn, the Marines said today.

Capt. Bill Wood, base public affairs officer, said he told festival organizer Sam Lono today that approval was being withdrawn because Lono did not answer the Marines' letter setting forth conditions for holding the makahiki.

Wood said Lono told him the festival would go ahead without approval, but Wood said that festival participants would be stopped at the base gate.

"There's not enough time left now to plan it," Wood said.

He said that the public would be allowed on base as usual for other weekend events, including youth football games and a bicycle motocross competition.

Lono, a kahuna from Kaneohe, wants to reactivate the ancient Hawaiian temple to the god Ku and his counterpart Hina on the Marine base.

He had planned to hold a Lono O Ka Makahiki Festival this weekend on the three days of Ku — Kukahi, Kulus and Kukolu (Saturday, Sunday and Monday.)

The Marines wrote Lono Oct. 1, setting forth 15 conditions to which he had to agree in order to hold the festival.

In an interview yesterday, Lono said he did not agree with the

conditions, but acknowledged that he had not answered the letter. He said that he plans to go ahead with the makahiki with or without approval but "whatever will be, will be."

"IF THEY'RE going to stop me, they'll have to arrest me at the gate," he said.

Lono could not be reached for comment today after his meeting with the Marines.

The Marines' announcement said that Lono had failed "to agree to conditions required to ensure safety, security and sanitation during the event and removal of religious artifacts following the ceremonies."

Lono had asked participants to bring pohaku (stones) from their yards to be used in rebuilding the heiau adjacent to Pyramid Rock.

But the Marines' Condition No. 2 said that "no permanent construction will be permitted on board Marine Corps Air Station, Kaneohe Bay, Hawaii."

It also said that "all religious artifacts, rocks, ornaments, altar pieces or other items of religious significance brought by festival participants must be removed from Marine Corps Air Station, Kaneohe Bay, following the event. Should any items of property remain after the festival, the United States Marine Corps will dispose of these items in any manner it deems appropriate."

Lono said he feels that means that "they could bulldoze the pohaku into the sea!"

He said he has already received stones from Maui, Molokai and Kauai. "How can the people come back over here and get their stones and take them back?" he asked.

"Under the Religious Freedom Act we have every right to be there," he said.

CAPT. WOOD said denial of the request for the festival does not prohibit religious worship under the provisions of the American Indian Religious Freedom Act. The announcement said "future requests to worship will be given every consideration."

He said that Lono's group had been allowed on the base many times in the past.

The Marines planned to require all participants to register when entering and leaving the base, and to indicate whether they would spend the night (in tents or campers) adjacent to the Pyramid Rock beach pavilion.

No surfing was to be permitted. Net fishing was to be allowed "only in conjunction with actual religious ceremonies," according to the conditions contained in a letter signed by Col. M.H. Sautter, commanding officer of the base.

Condition No. 13 said, "If problems are encountered with large numbers of festival participants failing to abide by the conditions listed herein, the festival will be immediately terminated by me."

Also, all plans were "subject to cancellation" should they interfere with military operations.



Sam Lono: Set to butt heads with the Marines

Shark-attack victim's family battles red tape

Star-Bulletin

□ Three months later, and Ray Mehl isn't declared dead

By Rod Ohira

Star-Bulletin

Tuesday, January 16, 1990

On Oct. 1, Ray Mehl left his wife and three daughters in Hoodport, Wash., to "set things up" in Hawaii after friends here had promised him a good-paying job.

"We were going to start out brand new," recalls Pam Mehl, the 32-year-old carpenter's wife.

She had finished packing and was preparing to join her husband in Hawaii when her sister-in-law called Oct. 15: "She told me Ray was dead."

Later that night, one of Ray's friends called from Honolulu and bluntly told Mehl her husband had been eaten by a shark.

"I called the police and coroner's office, but no one would tell me anything," Mehl said. "I couldn't find out if he was dead."

It's been three months since her husband disappeared Oct. 14 while scuba diving off Kahe Beach Park, and Mehl, now living in Stevensville, Mont., still can't get official confirmation that he is dead.

"Ray had no insurance, and without a death certificate, I can't apply for Social Security benefits," Mehl said by telephone. "I can't even sell his motorcycle without power of attorney."

City Medical Examiner Alvin Omori said he never has issued a death certificate in cases where bodies have not been recovered.

"We need definitive proof for the protection of the public," Omori said. "We have to be careful because there are documented examples (of mainland cases) where people have faked deaths."

Fire-rescue divers only were able to recover a small piece of body tissue and some dive equipment in the waters off Kahe Beach.

Omori's office recently sent the tissue to Connecticut for genetic analysis. If the lab is able to identify the DNA, it will request blood samples from Ray Mehl's parents in an attempt to identify the tissue.

Omori, however, said the process is still in the experimental stage and he considers it a long shot.

See FAMILY, Page A-8



Photo courtesy of Pam Mehl

Pam and Ray Mehl are shown with Tracy, 1, Briel, 2, and Nikki, 13, last May. Ray Mehl disappeared in October, the apparent victim of a shark attack.

FAMILY: Still struggling to overcome loss

Continued from Page A-1

"I'm not optimistic," he said.

"But it's all we can do. We only had a portion of the large intestine and nothing to compare."

If the DNA analysis proves inconclusive, Omori said Mehl's only alternative is to file a petition with the Circuit Court for a judicial finding and declaration of death, which requires a seven-year waiting period.

The court, however, could waive the waiting period and issue a "presumptive finding," based on strong evidence indicating death.

It did that, Omori said, in the case of Clarabelle "C.B." Lansing, the flight attendant who was swept out of an Aloha Airlines jet in 1988 when part of the plane's fuselage tore away in flight.

"In the case of the stewardess, the family petitioned to have her declared legally dead," Omori said. "There was very good evidence, based on her work record and passengers' accounts that she was aboard the flight."

Mehl, however, is on welfare and doesn't have the money to go through the legal process of filing a petition.

"Ray wanted me to get rid of everything, including our car," she said. "I kept only our summer clothes, china and some sentimental things."

"It has been a major burden because I used the money to pay off some of what we owed."

Patricia NaPier, a Honolulu attorney who has been assisting Mehl at no cost after learning of her situation, estimates out-of-pocket expenses to petition the court will be \$300.

"I can't blame the medical examiner's office if they don't want to make a determination, but somebody has to," NaPier said. "The judicial process is expensive for

someone who has no money."

NaPier said it has been a nightmare for Mehl because "she's stranded on the mainland, and nobody in an official capacity here seems to give a rip."

NaPier added, "I'm convinced it was Ray Mehl that died."

George Balazs of the National Marine Fisheries Service, a sea turtle biologist who is an authority on documenting shark attacks in Hawaii, also believes that Ray Mehl is dead.

Balazs, after checking and cross-checking accounts provided by witnesses, believes Mehl was attacked by a tiger shark.

"Professionally and scientifically," Balazs said, "we don't know for certain if he drowned first, was consumed by the shark or was grabbed (by the shark) in a living condition and then drowned."

Balazs said Ray Mehl, a strong swimmer but an inexperienced diver, was spearfishing for parrot fish with Glen Chapman near an offshore discharge pipe at Kahe Beach Park when he was attacked.

"Glen told me they were next to the pipe and Ray was behind him to the left," Balazs said. "Glen was looking for parrot fish and said it was only for a minute or two."

"When he turned to look for Ray, he was gone."

Chapman later recalled that parrot fish began huddling near his fins at one point.

Balazs said the unusual behavior of the fish indicates that a shark might have been in the area.

Fire-rescue divers spotted a decapitated body with the left arm missing the next day. Before they could recover it, a 12- to 14-foot tiger shark, weighing 1,200 to 1,500 pounds, consumed the body.

A spear gun and scuba tank with regulator and vest attachments later were recovered and identified as equipment that had been loaned to Ray Mehl.

"The piece missing from the left side of the vest indicates a shark bite," Balazs said.

But that isn't conclusive proof it was Ray Mehl who died, Omori said.

Omori's office also interviewed witnesses but received conflicting reports. Balazs, too, received conflicting stories but feels Chapman is a credible witness.

"He never once suggested to me it was a shark," Balazs said. "But in cross-checking everything he said, it all panned out."

Balazs and some friends sent a Christmas donation to the family in Montana.

"I'm really thankful for that," said Pam Mehl, who has three daughters — Nikki, 13; Briel, 2, and Tracy, 1. "We had a good Christmas, and right now, I'm just trying to get the girls back to normal."

"Briel still doesn't know why Daddy's not coming home from work when his motorcycle is outside," said Mehl, who has held a memorial service for her husband.

"I know my husband loved us," she added. "If he were alive, I'm sure he would have contacted us by now. The diving gear was identified, and nobody else is missing, so I don't understand why this is taking so long."