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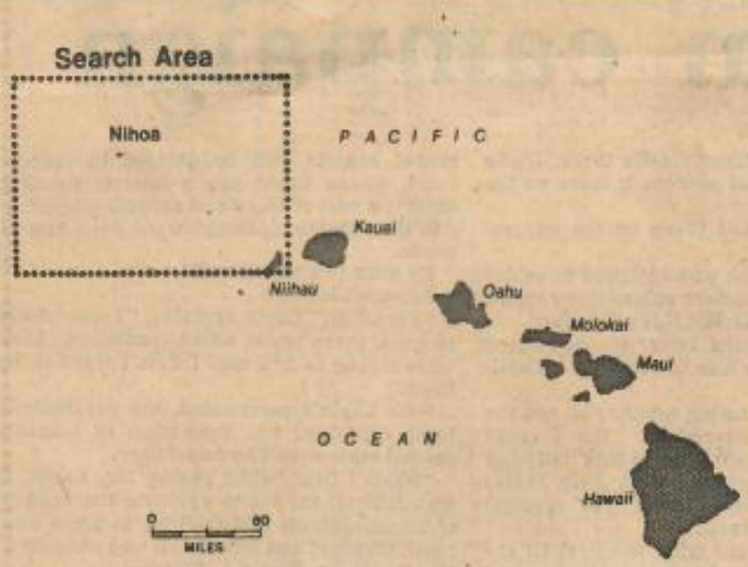
Plane Missing Here

A twin-engine DC-3 aircraft was reported apparently missing off Kauai today after the pilot said it was low on fuel on a ferry run from California to Hawaii.

Two Coast Guard planes were searching for the craft, which left San Jose at 3:40 p.m. yesterday. The DC-3 carried a pilot and co-pilot.

The Federal Aviation Administration said the plane, owned by Trans International Airways, was due to run out of fuel about 9:40 a.m. today. The Coast Guard had contact with the plane at 9:25 a.m. today, but lost it shortly afterward.

A-4 Honolulu Star-Bulletin Friday, July 20, 1979



Searchers for DC-3 find debris and dye

An Air Force plane assisting in a search yesterday sighted debris and green dye which may be traces of the missing DC-3 that ditched Friday morning northwest of Kauai after it got lost and apparently ran out of fuel.

The debris was spotted 145 miles west-northwest of Kauai about 5 p.m., but because of darkness it could not be determined whether the debris was from a plane.

The debris was sighted by the last plane continuing the search yesterday after five others returned because they were running out of fuel. The last plane continued to search in the area where the debris was sighted but broke off the search, also because of lack of fuel, about 9 p.m.

A Coast Guard spokesman said the search might be resumed this morning.

Yesterday six planes combed 21,760 square miles of water at an altitude of 500 feet, west-northwest of Kauai.

The missing plane, a World War II-vintage transport, was being ferried to Honolulu from California, but reportedly became lost when its navigational equipment malfunctioned.

The two men aboard have been identified as James P. Friedlund, of Huntington Beach, Calif., and Dick Williams, of Dallas, Tex. Friedlund is also a pilot for Western Airlines.

He was in radio contact with at least three commercial airliners and a Coast Guard search plane, but his position could not be pinpointed before the plane ditched Friday morning.

A-10 Honolulu Star-Bulletin Thursday, July 26, 1979

Civilians Continue DC-3 Search

Four small civilian aircraft were to fly a search pattern today in an area search organizers say the Coast Guard did not cover earlier in its search for two men missing since a DC-3 they were ferrying to Hawaii ditched in the ocean Friday morning.

The private search is concentrated roughly 375 miles west southwest of Honolulu.

FRED SORENSON, president of Flight Contract Services, an aircraft delivery firm which ferries planes, said they are searching about 75 miles south of the southernmost area covered by the Coast Guard before it called off its search at sunset Monday.

"We're involved right now in conducting a personal search for the airplane," Sorenson said.

"The Coast Guard flew on a position they got by a direction finding trace," he said, adding that the position could have been that of one of the commercial airliners the fuel-short DC-3 talked to by radio.

COAST GUARD spokesman Raymon Fullerton said a Coast Guard plane had voice radio contact with the twin-engine, propeller-driven plane shortly before it went down and received a navigation fix, placing the plane near Kauai, from the DC-3's pilot, James P. Friedlund.

However, Fullerton said, Friedlund's plane did not have the most sophisticated navigation equipment and it could have erred. He said the Coast Guard does not "take issue with what anyone else wants to do" in private searches.

Sorenson said he and other civilian pilots are enthusiastic about the search further south because Friedlund reported shortly before radio contact was lost that he had picked up transmission from a Honolulu radio station and was trying to home in on it.

BECAUSE OF Island mountain ranges, the DC-3 would have had to have been further south than the Coast Guard searched to pick up the commercial radio signal, Sorenson said.

Today's civilian searchers were using two twin-engine Beechcraft, rented by Sorenson's firm, and two chartered twin-engine Pipers, Sorenson said.

Friedlund, of Huntington Beach, Calif., and co-pilot Dick Williams of Dallas, Texas, were attempting to ferry the vintage DC-3, owned by Transnational Airlines, here from San Jose, Calif., when they went off course and ran out of fuel.

A-14 Honolulu Star-Bulletin Tuesday, July 24, 1979

Coast Guard Ends Search for Missing Plane, Crewmen

The search for a twin-engine DC-3 aircraft which ditched in the ocean west of Kauai Friday with two men aboard was called off by the Coast Guard at sunset yesterday.

What appeared to be green dye, a possible distress signal, was seen yesterday 200 miles west of Kauai but debris spotted earlier could not be substantiated as having come from the missing aircraft.

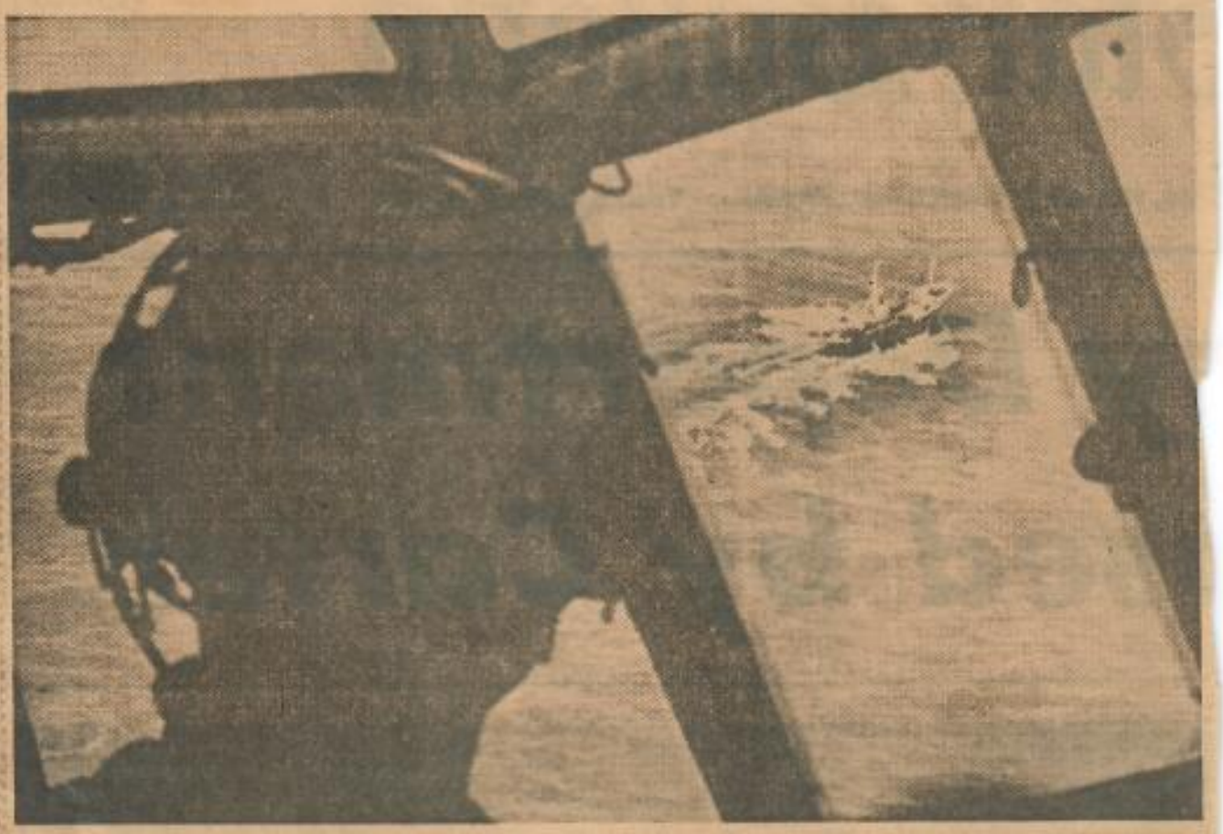
Pilot James P. Friedlund and co-pilot Dick Williams were attempting to ferry the World War II piston-engine plane to Honolulu from San Jose, Calif. The plane was owned by Transnational Airlines.

Friedlund, a Western Airlines pilot, lived in Huntington Beach, Calif., and Williams' address was listed as Dallas, Texas.

The crew sent radio messages saying the aircraft had overshot Oahu and run out of fuel Friday morning.

A Coast Guard spokesman said the search would not be continued because no positive trace of the downed aircraft or of the two crewmen had been found.

Star-Bulletin PAG



CHECKING FOR VIOLATIONS—A Coast Guard C-130 checks for violations of the new 200-mile fishing zone off the coast of California. —Associated Press Photo.

Coast Guard Patrols Stretched in Pacific

By Lyle Nelson
Star-Bulletin Writer

The Coast Guard stretched its sea patrols today to enforce the new 200-mile fishing limit the United States hopes will reduce foreign fishing activity within territorial waters.

"We'll be out in force, such as we have in resources," said Rear Adm. James W. Moreau, Coast Guard commander.

"We'll have three buoy tenders at sea, planes from Barbers Point flying surveillance, and a boat from American Samoa under way," he said.

Moreau's range of concern stretches the length of the Hawaiian chain from South Point around the Northwest Islands all the way to Kure Atoll west of Midway.

His forces also will have to patrol the Samoan area, Guam and the Line Islands south of Hawaii.

PERMITS WILL be required for foreign vessels to fish within the territorial area.

In one of the first of those granted by the Western Pacific Regional Fishing Management Council, Russia was given two permits to work

seamount areas west of Kure. Their limit will be 1,000 metric tons of alfonson (a red fish, two feet long, resembling the squirrel fish) and pelagic armorheads.

The council is preparing another permit for Japan for the same catch.

Foreign vessels within the area will be boarded, Journalist Chief Jim Gilman said, to see whether they have a permit. If they do not, they will be ordered to leave the territorial limits.

Skippers who persist will be subject to fines and their vessels subject to seizure.

Maximum penalties are a $100,000 fine and 10 years in prison.

Hawaii's Coast Guard forces will enforce the 200-mile limit without additional ships or planes.

Adm. Owen W. Siler, Coast Guard commandant, said here recently that while the Coast Guard will be getting eight new search airplanes and 15 helicopters, none will be assigned to Hawaii.

AS MOREAU pointed out last summer in anticipation of today's widened responsibility, his Coast Guardsmen face longer patrols and therefore more sea time and air time.

"We started last summer to beef up patrols," he said.

Wilvan G. Van Campen, executive director of the Pacific council, said it is reviewing applications from four Japanese trawlers to fish the seamount area west of Kure.

He said the council proposed a 50-mile limit around Hawaii to protest billfish, tuna and the preciousl coral that is the basis of Hawaii's business in black, gold and pink coral jewelry.

The government, he said, has urged a limit of 100 miles around Hawaii, and 50 miles around Guam.

The next meeting of the council will be held next month in Pago Pago.

The extension of the fishing zone gives Moreau's men an area to patrol that is about four times the size of California.

As Siler said earlier, the major problem will be to educate other nations.

But Russia, Canada and Mexico, among others, also enforce a 200-mile limit.

200-Mile Zone in Effect

Limits on Foreign Fishing Enforced

By the Associated Press

In the Pacific, off the coast of New England and in waters shared with Cuba, the government today began to enforce the new U.S. 200-mile limit on foreign fishing vessels.

A Soviet trawler, alleged to be in violation, was boarded this morning.

Adm. Owen W. Siler, commandant of the Coast Guard, said he received word of the boarding from the cutter Sherman, but had few details.

He said the Coast Guard boarded a 300-foot Russian trawler about 80 miles southwest of Martha's Vineyard after the Soviet vessel was found cruising through an area set aside for American lobstermen.

Siler told reporters aboard a Coast Guard observation flight that the boarding was "for violating fixed gear location agreements."

He said he did not know whether the trawler was fishing at the time or if it had damaged lobster traps or floats. He said the trawler had hake aboard, a permitted variety of fish.

The trawler was given a written warning, Siler said.

"The Coast Guard is ready and accepts the challenge," he said as staff, aircraft and vessels were beefed up for the chore.

Until today, the limit was 12 miles. Under complaints from the U.S. fishing industry that foreign fishermen were ruining their livelihood, Congress adopted the 200-mile zone and the Ford administration a year ago approved the legislation.

RED CROSS MONTH—John Henry Felix, chairman of the Hawaii Red Cross, Lt. Gov. Nelson K. Doi and Red Cross volunteer Alice Wong help security guard Bob Byrd raise the Red Cross flag today at the State Capitol, signifying the start of Red Cross Month. Ala Moana Center is flying 134 Red Cross flags to support the raising of funds during the month. —Star-Bulletin Photo by Warren R. Roll.

No foreign fishing vessels were spotted off the West Coast today.

In two of the enforcement areas, spokesman for the Coast Guard said that during the first 72 hours of the ban violators would be given a warning and would be subject to seizure only if a second violation occurred. Spokesmen at the central information office in New York would not confirm that, however.

There were doubts about the immediate effectiveness of the limit. "Most fishermen are all the same. If they think they can beat you, they'll cross the line a little," said a National Marine Fisheries Services agent, Ken Creamer.

Creamer is one of the 11 agents responsible, along with the Coast Guard, for enforcement along the Alaskan coastline — the nation's largest and richest fishery.

In Boston Daniel Russ, a Commerce Department official in charge of enforcement from Canada to North Carolina, said he still was waiting for instructions about issuing permits to foreign vessels before they can fish inside the limit.

THE GOVERNMENT'S first task is stopping for two months all foreign fishing off the Pacific Northwest, except for tuna. It also must limit foreign fishing in the North Atlantic to only hake and squid, for the time being, and halt all fishing in the Gulf of Mexico, where no countries have applied for licenses.

Japan, South Korea, Spain and the Common Market nations already have signed agreements to allow their fishermen to get permits from the Commerce Department, but Congress must still approve them.

A State Department spokesman said those countries agreed to suspend fishing in U.S. waters until Congress approves the agreements.

An agreement between the United Statas and the Soviet Union has been ratified and Soviet vessels with permits will be allowed to fish within the zone.

Several other nations also have declared 200-mile fishing or economic zones. Cuba did so yesterday. Among the others are Japan, Canada, the eight maritime nations of the European Common Market and the Soviet Union.

2 More Are Arraigned in 'Invasion' of Kahoolawe

Two more Kahoolawe "invaders" were arraigned yesterday before U.S. Magistrate Thomas P. Young.

Both Glen K. Davis, 24, and Karl A. Mowat, 27, pleaded innocent to charges that they trespassed on the Island earlier last month.

They are among 15 members of Protect Kaho'olawe 'Ohana reported to have landed on the military controlled Target Island seven miles southeast of Maui since Jan. 30. They are trying to stop its use for target practice and dramatize demands for its return to State control.

Eleven of the "invaders" have been arrested on the Island. Two others reportedly swam to Maui and have since been seen on Kauai and two—Walter Ritte Jr. and Richard Sawyer—are believed to be still hiding there.

DAVIS AND MOWAT, both of Molokai, were arrested on the Island Feb. 9 and were indicted by a federal grand jury last week.

Young explained that because of their ages their cases were handled differently from others arrested earlier for the same violation.

The Youth Corrections Act and a recent ruling of the Ninth Circuit Court of Appeals provide that young adults—between the ages of 18 and 26—may be given longer sentences than older offenders, Young said.

Clayton Ikei, attorney for the two, said that same act also provides that those so charged may be entitled to a jury trial.

Young did not agree, but gave Ikei two weeks to file motions. He allowed Assistant U.S. Attorney Robert M. Manekin two weeks beyond that period to respond and said the court clerk will advise both sides as to the date of a hearing on any motions filed by Ikei.

Ikei also asked for a trial date separate from others arrested earlier on the same charges. And he announced he was withdrawing as counsel for Charles Warrington, one of three protesters charged with trespassing on Kahoolawe in January.

WARRINGTON, George Helm and Francis Kauhane are to go on trial April 26.

The magistrate set May 9 for pretrial conference and 9 a.m. May 17 for a "nonjury trial" for Davis and Mowat.

Young also ruled that the present bail and conditions would stand, but he noted that Ikei already had filed a motion asking that the bail for the two be reduced. A separate hearing will be held on that matter, Young said.

North Pac

'They're trying to

By MARY COOKE
Advertiser Food Editor

When Hawaii state selected Hawaiian Tuna Packers to conduct an experimental north Pacific albacore trolling project this summer, the fishermen who signed on knew the fish were out there, in fabulous numbers.

Their problem was to demonstrate, to industry, government and the world, a fast, efficient and economical way to catch these distant albacore (a type of tuna) and get them back to U. S. canneries.

In brief, they were being sent out to prove the economic value of the north Pacific fishery to Hawaii and the United States.

They spent five months at sea without coming in to port. A mother ship based at Midway Island off-loaded their catches and on-loaded their fuel and food supplies.

ay Puffinburger, manager of the Tuna Packers plant (a division of Bumble Bee Seafoods of Castle & Cooke), said half the fleet is still out so it is too early to compute the total catch. Nor has there been time to analyze the overall operation.

"At times we were in sight of each other but most of the time it was just radio contact."

The 20-boat fleet (mostly tuna jig boats from the west coast) included five under Hawaii registry: the Lusty, Easy Rider, Three Jacks, Day Star and Typhoon.

The Kauai-based, 65-foot Lusty, the only fleet boat owned, skippered and crewed by local-born Islanders, has come home.

The men on board had no facts or figures on the project except their own total catch, but they told the story of their five months at sea.

Jay Hebert, owner-skipper of the Lusty, said its biggest single haul was 7,116 albacore (just under 43 tons) which they brought in to Kewalo Basin Aug. 31.

Before that, they had transfered catches of 8 tons and 30 tons to the mother ship at Midway Island.

Crewman Drew Flanders said, "The first two months we had a very poor load because we were too early on the grounds. The fish were migrating but they were too far east.

"Going out the way we did in April, it was a little too early. Finding that out was part of the experiment.

"With better timing, we have the potential to pull in 150 to 200 ton (per boat) per season. It just depends on how long we can stay on the fish.

"That's why we had a 1,000-ton-capacity mother ship. From time to time, they off-loaded all the boats and gave us fuel and groceries so we could go back on the grounds instead of coming all the way back to Hawaii.

"Three times the mother ship came back to Honolulu with fish, and to get more fuel for us. She even off-loaded and fueled us at sea when we had good weather.

"Maybe in years to come that will be the method. It was experimental this time. They're trying to make this fishery work the way it should."

Hebert said for the past four years American charter boats — "but never in any great quantity" — have been going out "to check out the grounds" in the north Pacific.

"It's a world fishery. The Japanese, Russians, Koreans were all there working the area when we were there," he said.

Even so, Flanders said, "You can be pulling in anywhere from 200 to 800 fish a day, for weeks at a time.

"We'd have to look for the main bodies of fish by following these 'cold water edges' where it registers, say 63-degree sea water temperature and then it jumps down to 60.

"Then you know you've got a cold-water wall. The live bait (small, free-swimming ocean fish) back up against it and they're just a sitting banquet.

"The albacore come in and hold them there and they just sit there and eat and get fat."

FLANDERS

Hebert said "underwater mountains cause upswellings that bring the live bait near the surface. We just worked our way back and forth, back and forth, following the cold water edges and moving north as we went along."

When they were 500 miles below Alaska, Flanders said they were working 18-hour days "because the sun wouldn't set till 10:30 at night.

"We'd troll with 13 lines, with the boat on automatic pilot going in circles, and the fish would follow the boat.

ific albacore grounds

make this fishery work'

"If the fish sounded or moved off, all our boats spread out again. We tried to get a good spread, with all the boats working together."

"The lines are set up hydraulically. You just keep pressing a foot peddle and you can pull in hundreds of fish in one circle.

"Then if the fish sounded or moved off, all our boats spread out again. We tried to get a good spread, with all the boats working together.

"At times we were in sight of each other but most of the time it was just radio contact."

Between the big fishing scenes, Flanders said there was always clean-up work to do, general maintenance of the boat — and cooking.

"I did most of the cooking and I really liked doing it when there wasn't too much other work, or when the sea wasn't rough.

"When you hit a storm all you can do is shut down everything and eat sandwiches."

Flanders said whenever he turned in his grocery list to the mother ship (when she was about to make a run back to Honolulu) it included requests for saimin, Maui onions, black beans, oyster sauce and other local specialties.

"Most of the other boats were from California and they wanted things like salsa and chili," he said.

Flanders' cookery retained its Island character.

"In warmer waters, we'd catch mahimahi and ono," he said. "I'd always cut some of that, package it and freeze it so when we got up north we'd have Island-type fish.

"When we caught albacore I made sashimi with it and it was delicious. We'd have sashimi, rice and shoyu, or I'd broil the albacore with a little oyster sauce.

"Whenever we went back to the mother ship at Midway, I'd dive for lobster and then fix that with black bean sauce."

Another treat, for the eyes as well as the palate, was fresh ocean squid.

"On moonless nights, they'd come around the boat, thousands of them," Flanders said. "They'd take the lure on the end of a bamboo pole. The average ones we caught were about a yard long.

"I'd just cut the main mantle, scrape the skin off and pound it with an abalone hammer to make it a little soft.

"Then we'd have it sauted in butter and sometimes I'd bread it. It was good. Actually, it tasted like abalone."

Advertiser photos by T. Umeda

HEBERT

Still, five months at sea is a long haul and the sailors are glad to be home. Both say they have never voyaged so far, for so long before but they would be eager to go again.

Moreover, having seen what they've seen on their travels, they're deep-down true believers in the north Pacific albacore fishery.

Flanders said it in a single sentence:

"Boy, a couple of times we were in a body of fish maybe 60 square miles!"

Honolulu Star-Bulletin

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A-8 Saturday, September 15, 1979

Good News for Fishing Industry

The Navy's grant of permission to the state for the use of facilities at Midway Island by Hawaii fishermen has paid off handsomely. The albacore catch for the current season is estimated at 2,000 tons, worth $2.6 million. And that despite generally poor results elsewhere in the Pacific.

The idea of using Midway was to overcome the problem of the distance between Hawaii and the fishing grounds north of Midway. Midway is only a four-day round-trip from the grounds compared to 28 days for Honolulu.

The state is negotiating with the Navy to repeat the arrangement next year, with the prospect of expanded operations.

More good news for Island fishermen comes in an announcement from Washington that the federal Economic Development Administration has approved a $176,000 grant to construct a fish freezer in Hilo. This will enable Hawaii fishermen to flash-freeze raw fish for export to Japan.

The Hilo freezer is the fourth fishing facility approved by the EDA for Hawaii in the past year — at the urging of the Hawaii congressional delegation.

Projects announced earlier were a tuna baitfish plant in Kaunakakai, Molokai, ice machines and cold-storage rooms at Pokai Bay, Oahu, and a fish-freezing plant at Nawiliwili, Kauai. Additional funds were provided by the state and county governments.

The results of the Midway experiment suggest that intelligent cooperation and assistance by government, as in the EDA projects, can make a big difference to this struggling industry.

Fishermen, hom

Flanders: "The albacore migrate through the north Pacific and on to the west coast and Canada, so you follow the fish."

By MARY COOKE
Advertiser Food Editor

They're industry pioneers, 60 or 70 young men in a score of jig boats who, day after day, are returning to Kewalo Basin after a five-month fishing voyage in the North Pacific.

They are members of a 20-boat American fleet that was sent out this spring, under contract with Hawaiian Tuna Packers, to explore the economic value of albacore fisheries in the north Pacific.

Recent arrival, with an almost capacity-load of albacore, was the 65-foot Lusty, the only boat in the fleet that was owned, skippered and crewed by local-born Islanders.

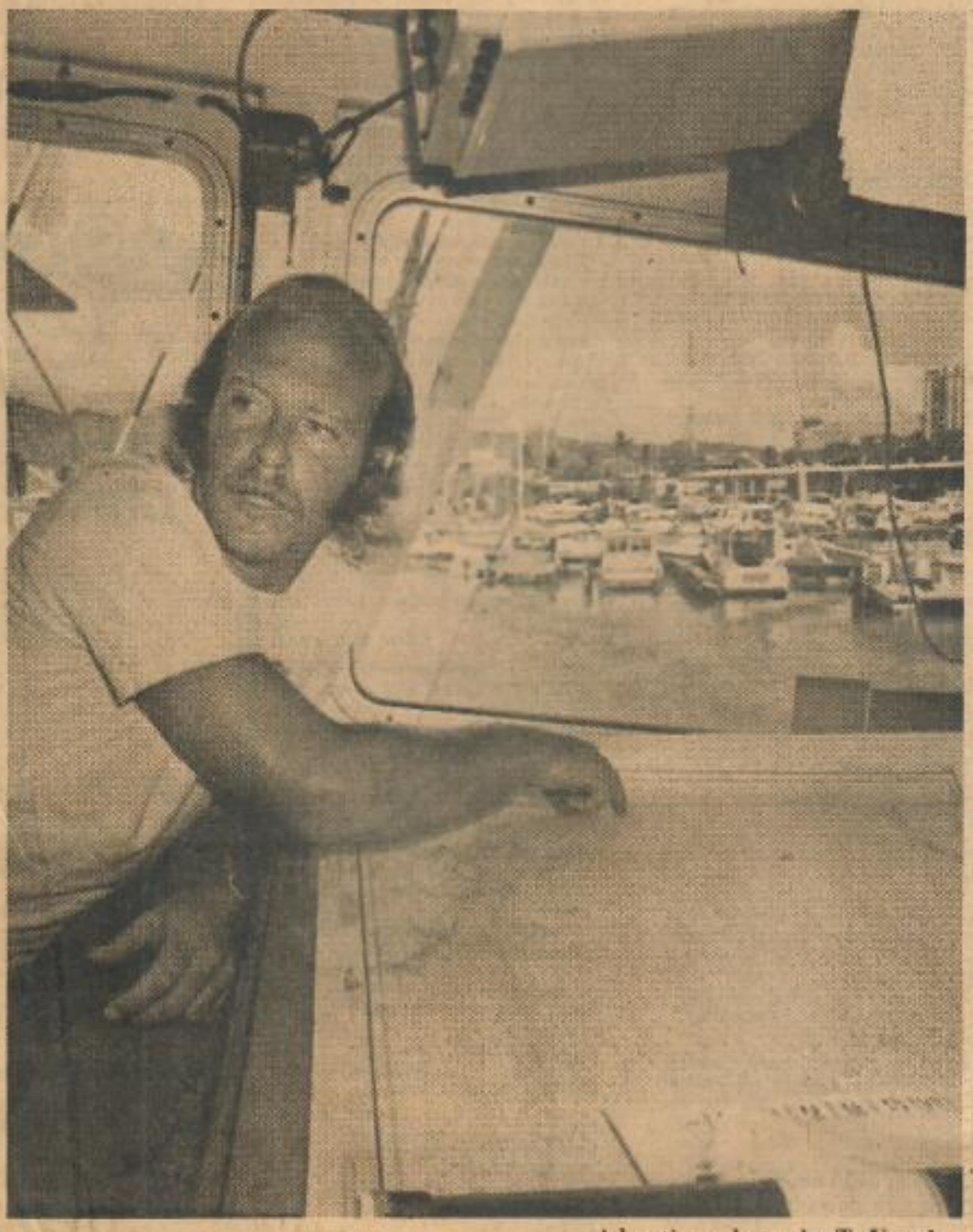
Owner-skipper Jay Hebert and crewman Drew Flanders, both of Kauai, left on April 5 and returned to Kewalo Aug. 31.

They covered more than 20,000 miles of north Pacific waters and chalked up a total catch of about 12,710 albacore, weighing in at about 96 tons.

For their story of how the modern fisherman hunts, catches and brings home prime white-meat tuna for your salads, sandwiches, crepes and casseroles, see page 5.

eport
Honolulu Advertiser
Wednesday, September 12, 1979

e from the sea



Advertiser photos by T. Umeda

Hebert: "In the beginning, there were times when we were closer to Japan than anything. Often we were about 2½ days from the Aleutian Islands."

Honolulu Star-Bulletin

Thursday, September 13, 1979

Section E

Midway Tuna Venture Called Huge Success

By Helen Altonn
Star-Bulletin Writer

Hawaii's first albacore fishing venture off Midway was a huge success, bringing fishermen about $2.6 million and giving the state another $13.4 million in related economic benefits.

This was reported yesterday in an interview with Stanley Swerdloff, who as a consultant to the Department of Land and Natural Resources is preparing a state fisheries master plan for the state.

Swerdloff said the Pacific-wide albacore fishery was a "disaster," with the poorest season ever off the Mainland's west coast and a "very sub-par year" for the Japanese, "which makes the catches off Midway amazing . . .

"We don't know what would happen in a good year," he said.

THE STATE LAUNCHED the albacore trolling project in April to prove the economic value of a North Pacific albacore fishery to the United States and to displace some of the 10,000 tons of tuna imported annually into Hawaii.

The Navy gave the state a permit to use Midway Island as a base from Oct.1, 1978, to Sept. 30.

Hawaiian Tuna Packers, which submitted a winning project proposal to the land department, sent a troller fleet of 20 vessels and a mother ship to the fishing grounds.

Six other vessels not under contract also joined the fleet.

Swerdloff said eight vessels are still in the area completing their final loads and the others have returned to Hawaii or the West Coast.

It's expected that the albacore catch will total about 2,000 tons, which was considered an optimistic goal, he said.

TUNA PACKERS SAID in its project proposal that if the Midway trollers caught that much fish it would reduce the company's dependence on the world tuna market and result in a U.S. balance of payment savings of $3 million to $3.5 million.

The season started off badly, with a total catch of 66 tons from April to June, "which is terrible," Swerdloff said. "We should catch that in one day."

But he said, "It began heating up in July, with catches of close to 1,000 fish per day per vessel. It's like panning for gold," he said, explaining that 500 to 700 fish per ship daily is "a hot catch."

Most of the boats had two full loads by the end of August and headed for home, he said, but the ones who stayed continued to pull in 200 to 500 fish daily.

He said the catches would have been roughly half as large if the mother ship, a purse seiner, had not been based at Midway to load the fish and return the catch to Honolulu.

THAT ARRANGEMENT enabled the vessels to cut by 24 days the time they were gone from the fishing grounds. Midway is only a four-day round trip from the fishing grounds; the trip to and from Honolulu takes 28 days.

The mother ship made three trips to Honolulu, with 1,750 to 1,800 tons of fish going to the local canner and the rest to the West Coast.

Swerdloff said the state has renewed negotiations with the Navy to use Midway again next year. Both the industry and the state administration expect significant expansion of the fleet and extension of the season.

State Fishing Project Suffers

A-4 Honolulu Star-Bulletin Friday, October 12, 1979

Tuna Fishermen Can't Find Moorings

Continued from Page One

Coast to continue fishing in the Pacific area, but if proper facilites aren't provided for their vessels they will go to Alaska instead.

And they said the other trolling vessels most likely will go with them.

State officials hoped to resolve the problem temporarily by this weekend, possibly by moving the trollers to the University of Hawaii's research base at Snug Harbor.

However, state Marine Affairs Coordinator John Craven wasn't receptive to the idea.

"Snug Harbor is dedicated to oceanographic vessels coming in and out...I hope they find an alternate solution," he said.

J. B. McCORMICK, head of the Water Transportation Facilities Division in the state Transportation Department, said Pier 35, with 15 spaces, was offered to the fishing vessels.

But he said the boats refused to go there because of lack of electricity, security and other amenities. Instead they tied up at the loading dock at Kewalo, "denying space to local boats," he said.

"The state is trying to build up the fishing industry, which has the full support of all elements of the state," McCormick said.

"But unfortunately, in the initial stage, there was some lack of communication between the public and private sector on specific requirements."

Also, he said the state didn't know how many of the West Coast vessels would be coming to Honolulu after the Midway fishing project.

"The second dilemma," he said, "is that we have some 40 local people waiting on the list wth the Harbor Division three years or more attempting to get into commercial fishing.

"IT IS VERY difficult for us, and a problem, because we can't hurt these people by bringing people from the Mainland for fishing business...You can be assured that the local boys will get rightful priority," he said.

He said with help from the Legislature the DOT expects to be better prepared next year to handle 15 to 20 Mainland boats. However, he said the department must redraft its "dolphin plan" to sink clusters of pilings in the water next to the Sand Island bascule bridge for the boats.

"It was all laid out and we were prepared to do it next year, but now it's out the window," he said, because it wouldn't fit the requirements of the vessels.

"But how much do you spend on the unknown?" McCormick asked. He said the state is reluctant to spend a large amount of money for facilities that the tuna ships might not need in a few years if they follow the fish to new grounds.

At the moment, anyway, the ships are hoping to expand their profits from the Midway fisheries and are unhappy about "the shuffle" they are getting from the state.

JERRY RAY, OWNER of the troller Archer, said, "We were assured there was tie-up space for the winter," but he said the boats can't go to Pier 35 because it doesn't meet their standards.

He said the boats cost about $400,000 each. Power is needed to keep the batteries charged. And the owners need a secure place to leave the vessels so they can go to the Mainland to attend to business matters, he said.

He said they want to buy homes and move here because of the lucrative fishing potential.

Ann Myking, part-owner of the Cape Mala, said the boats didn't even have space at Kewalo to tie up and unload their tuna when they arrived, and they had to go to Kauai.

"We wouldn't be here in the first place if it wasn't for the state," Ray said. "All of the other boats are waiting for our results...The fish are closer to Alaska, but nobody likes Alaska. It's too cold. But if we have to, that's where we will go."

JAY PUFFINBURGER, plant manager at Hawaiian Tuna Packers, said "everything was supposed to be taken care of — until the boats came here."

"The sad thing is that if we don't take care of them, if we don't treat them half-way decently, they may decide not to come here next year."

Puffinburger said 11 of the 20 Midway trollers are in Kewalo now, including three on permanent slips, four on temporary slips and the four with no place to go.

Mainland Tuna Vessels Can't Find Place to Dock

By Helen Altonn
Star-Bulletin Writer

The state's effort to develop Hawaii's fishing industry may founder because Honolulu lacks acceptable mooring facilities for Mainland vessels participating in the program.

Gov. George Ariyoshi said yesterday there is no easy solution to the problem because of limited waterfront space and a huge demand from local and outside fishing and recreational interests for harbor berths.

While the state is committed to developing a fishing industry, he said it cannot accommodate every boat that wants to dock here.

Two albacore trolling vessels left for the West Coast yesterday and the owners of four others went to state harbor officials "screaming" after they were warned to leave Kewalo Basin where they are tied up without authorization.

The six fishing ships were among 20 participating in the state's experimental project to exploit rich albacore tuna grounds the past summer, using Midway Island as a base.

THE PROJECT WAS launched in April under a contract between Hawaiian Tuna Packers and the state Department of Land and Natural Resources. It was acclaimed as a big success, netting fishermen about $2.6 million and resulting in about $13.4 million to the state in related economic benefits.

Several of the albacore boat owners said yesterday they would like to move here from the West

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The Sunday Advertiser

Established July 2, 1856

THURSTON TWIGG-SMITH *President & Publisher*
GEORGE CHAPLIN *Editor-in-Chief*
BUCK BUCHWACH *Executive Editor*
JOHN GRIFFIN *Editorial Page Editor*
MIKE MIDDLESWORTH *Managing Editor*

Honolulu, October 21, 1979

Tuna boats

Supporting the fleet

Until the state and private tuna fishing vessels can work out a more satisfactory berthing arrangement, Hawaii's ambitious plans to develop a strong local fishing industry appear threatened.

That is bad news for everyone.

IT IS DIFFICULT to pinpoint blame for the mixup, though much of it appears to rest on the state's shoulders. Surely someone should have anticipated the problem.

Basic amenities such as electricity and security are required if a sizable fleet of tuna boats is to operate out of Honolulu. That the state could not provide adequate mooring facilities for a handful of boats is indication of a problem.

There is much merit in the state's hopes to develop a thriving local industry. In spite of a poor catch, the recently concluded year-long fishing project off Midway was a success. It pumped about $13.4 million into the state, and fishermen in the experiment earned about $2.6 million.

In addition to the West Coast fishermen who took part in the Midway project, there are a good number of local commercial fishermen who would like to see the industry boom.

But they too are hampered by limited facilities, although local officials say they get preference over the West Coast boats.

THE SITUATION is doubly sad not only because there appears to be enough work for all, but also because the West Coast fishermen say they want to relocate here and make Hawaii home. They would also be contributing to the local economy.

The recently concluded fishing project proved that commercial tuna fishing off Hawaii can be a moneymaker. It is still a risk, since fish can migrate to other areas, but there appear to be enough benefits.

If commercial fishing is to prosper here, it will need a helping hand from the state. A good place to start is to be sure there are enough berthing facilities for the boats that will ply Hawaii's waters.

Our Fishing Industry

The state authorities have known for many years that due to the rich albacore resources, which are in close proximity to the Islands, it was inevitable that a large American commercial tuna fleet would eventually begin operating from Honolulu.

With this fleet comes business opportunities for the local community in fleet support activities such as shipyards, machine shops, diesel mechanics, electronics, large industrial machinery and parts, ships' stores, welders, electricians, marine products, refrigeration, and many more.

Next year we can expect 50 tuna vessels to be operating in the Midway albacore fishery. If the catch of this past season is typical, and there is evidence to indicate that it is, then the expected revenue for local businesses to be derived from this fleet will exceed $5 million.

This does not include jobs and income which will be enjoyed by our local cannery.

The lack of cooperation on the part of authorities has caused the captains of several vessels to decide not to winter over here this year.

For our company alone this unfortunate friction between these captains and the state has resulted in a loss of expected revenue in the neighborhood of $100,000 in the coming year. This revenue would have meant jobs for local talent; instead the money will be spent on the West Coast or in Alaska.

A principal consideration is the development of our own home-grown fleet.

A young budding fisherman, however, just doesn't walk into a bank and ask for $300,000 to buy even a modest vessel such as the type we will see next year. He must first have experience, and especially, he must have a catch record.

In the beginning he must learn the hard but noble labor of a deck hand; he must work for several years, prove his worth, run a boat for someone else (this is usually how one acquires a catch record), and then with his catch record and savings for a down payment he is ready for a vessel of his own. Without the help of the captains and their vessels from the West Coast these opportunities will not materialize.

The demand for seafood products exceeds the current world harvest. In these days of impending economic woes we cannot afford not to make the Islands as attractive as possible to fishing industry development--an industry which will assuredly continue to expand and prosper.

T. F. McDonough

Thursday, November 8, 1979 Honolulu Star-Bulletin A-13

State Working Up a 'Nest' for Tuna Fleet Based in Isles

20 NOV. 1999

By Helen Altonn
Star-Bulletin Writer

Mainland tuna vessels which were evicted from Kewalo Basin last month after a dispute with the state and temporarily accommodated at the University of Hawaii's research base were moved back to Kewalo today.

But they'll only be there about a week, until a permanent home is ready for them at Pier 35, where the state Transportation Department is installing power lines and mooring facilities.

The DOT began work at the pier last month with departmental funds, but it didn't have enough money to finish the job. The money was provided yesterday out of the general fund, said J.B. McCormick, head of the DOT's Water Transportation Facilities Division.

The Mainland vessels were part of an albacore fleet that participated in an experimental fishing program off Midway last summer. When they arrived here to unload their final catches, the owners of four ships said the state did not provide them with mooring facilities.

THE DOT CITED them for docking illegally at Kewalo Basin and then allowed them to stay until other arrangements could be made. After some high-level discussions, the University of Hawaii agreed to let the vessels use its Snug Harbor research facilities until today when the space was needed for research ships.

The DOT initially had offered the tuna vessels use of Pier 35, but they refused to go there, citing lack of electricity and security for their $400,000 ships.

Although an electrical hookup will be made, McCormick said, "The fishermen still don't like Pier 35. They would still rather have other accommodations, but it happens to be all there is.

"We're trying to provide the best we can in a very tight situation."

He said facilities will be provided for 10 to 15 ships now and additional funds will be sought during the next legislative session "to make sure we can take care of boats coming next year.

"WE REALLY BELIEVE the fishing industry is going to grow and, if there is orderly planning, we think we can handle it," he said.

But he said, "It has got to be a locally oriented fishing fleet. A transient fleet will go where the money is."

He said the latest check on Kewalo Basin shows 105 boat owners on the waiting list for mooring facilities. Some have been waiting more than three years, he said.

McCormick said the DOT and the state Department of Land and Natural Resources will submit a package proposal to the next Legislature to provide for the fishing program.

Planning money will be sought for a new pier—Pier 16—which will be used as an adjunct to Piers 17 and 18 for commercial fishermen, he said.

McCormick said an advisory committee composed of representatives of commercial and charter fishermen and cruise boats recently was formed to work with the DOT on the plans.

THE DOT IS WORKING with the fishermen in an attempt to go to a "nesting situation," where two or three boats tie up at a berth, instead of having a separate berth for each boat, he said.

He said this concept would help to relieve the congestion and reduce the waiting list at Kewalo because it would more than double the capacity at Pier 17, where there are now 20 to 30 boats.

If the nesting idea catches on, he said perhaps some of the single piers could be eliminated for a nesting complex at Kewalo.

But he said, "It would take awhile... because historically our fishermen have been able to come back to their own pier and have a locker and a telephone."

He said the DOT hired a consultant to propose new rules and regulations and the advisory committee was organized to review the first draft and "to start tying the whole thing together.

"This puts some sunshine in our management down there, and we're getting a lot of help from these people," he said.

THE COMMITTEE is expected to alleviate increasing friction that has developed the past year between fishermen and cruise operators at Kewalo, and between the boat owners and the DOT.

"We have always attempted to understand their problems, but nobody's ever looked at management (problems)," McCormick said.

"Now we have a better functioning unit. We have opened up the system down there so everybody know's what's going on."

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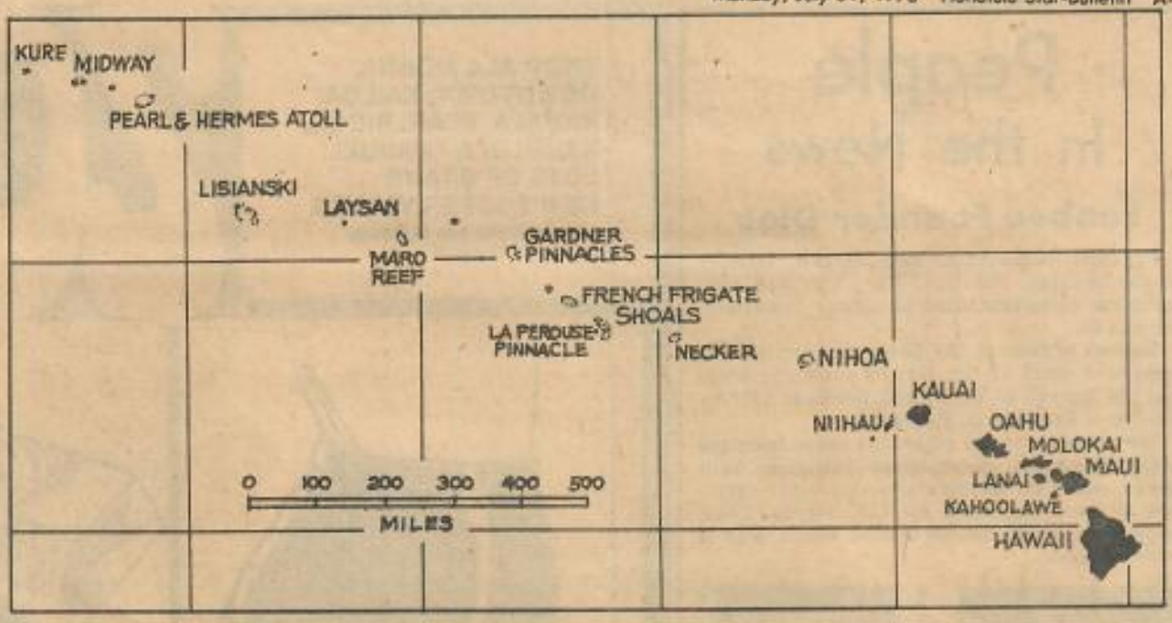
To Fish, You Need Bait

Aku fishermen spend much of their time trying to find the silvery nehu, the bait favored by the skipjack tuna. That's what the crewmen of the Fuji, at left, were trying to do in the Ala Wai Canal when they were spotted by Star-Bulletin photographer Warren R. Roll. They found no nehu, but got some small sardines to use instead. The fine-mesh nehu net is 600 feet long and extends 16 feet from the surface of the water. At right, the crew heads out to the open sea aboard the diesel-powered sampan to catch the big ones. The Fuji, built of Fiberglas on Sand Island last year, is owned by Sok Ho Choi.



Northwest Hawaiian Islands

By U.S. Sen. Daniel K. Inouye

We call them the Leeward Islands, but nationally and officially they are the Northwestern Hawaiian Islands.

This multiplicity of emergent tips of undersea volcanic mountains, stretching from Nihoa Island in the east to Kure to the west, is the home of the green sea turtle, the Hawaiian monk seal, endemic land birds, various fin and shellfish species, and millions of seabirds.

Man was unkind to these ecological jewels. Guano-diggers brought in rabbits which consumed the groundcover and the resulting sandstorms killed thousands of seabirds. Other birds were slaughtered for their plumage.

Sixty years prior to the Environmental Protection Act of 1969, Theodore Roosevelt's Presidential Executive Order 1019 set the Northwestern Hawaiian Islands aside as a bird preserve. By Presidential Proclamation 2416 in 1940, the area became the Hawaiian Islands National Wildlife Refuge.

Government agencies agree to explore the ecology of these fascinating Islands.

A tsunami of laws and regulations currently threatens to sweep over this national treasure of Islands.

Legislative crosscurrents include the Wilderness Act of 1964, National Wildlife Refuge System Act of 1966, Marine Mammal Protection Act of 1972, Endangered Species Act of 1973, Organic Act creating the territory and Admission Act of 1959, and various state of Hawaii resolutions, statutes, rules and regulations.

Wise response to and implementation of the laws and regulations require ecological information presently not available.

Hence it is highly gratifying to announce agreement between the National Marine Fisheries Service of the U.S. Department of Commerce, the state Department of Land and Natural Resources, and the Fish and Wildlife Service of the U.S. Department of Interior to explore in sensitive, scientific and thorough fashion the ecology of the area.

In May 1978, the Tripartite Agreement stated its purpose "to provide a detailed survey and assessment of the biological resources of the Northwestern Hawaiian Islands to form a foundation upon which to base management decisions concerning long-range uses and preservation of these living resources," a methodical and scientific approach.

The state of Hawaii will assess the fish resources out to a depth of about 20 meters, and help acquire baseline data on marine birds and turtles, terrestrial birds, and the Hawaiian monk seal.

Of particular interest to Hawaii will be a survey of the precious coral resources and proposals for control of its harvest, the potential impact on the archipelago of mining manganese nodules, and the potential for recreational and commercial fishing.

The difficult and delicate balance sought in this national issue is adequate protection of the varied natural endowments of the Northwestern Hawaiian Islands, while permitting multiple activities for the enjoyment of people.

Tuesday, Oct. 3, 1978 Honolulu Star-Bulletin B-9

Fishery Officials to Meet Oct. 23-27 on Big Isle

Fish will be the topic when approximately 100 federal and regional fishery officials gather in Kailua-Kona on the Big Island for three consecutive meetings Oct. 23-27.

All meetings will be held at the Kona Hilton Hotel.

The Western Pacific Regional Fishery Management Council will meet Oct. 23, according to W.G. Van Campen, executive director.

Its chairman is state Sen. Wadsworth Yee, who will be host for the meetings. The council is charged with managing and conserving all marine and fish resources within the 200-mile jurisdiction of Hawaii, Guam, American Samoa and the Northern Marianas.

THE NEXT TWO days will be taken up by meetings of chairmen of the eight regional councils. These include, besides the Western Pacific, the New England, Mid Atlantic, South Atlantic, Caribbean, Gulf of Mexico, Pacific (western coast), and North Pacific (Alaska).

The last two days, Oct. 26-27, will be taken up by meetings of the Marine Fisheries Advisory Committee, which advises the National Oceanic and Atmospheric Administration (NOAA). Charles Yamamoto, Honolulu, is one of 25 members of the committee, which includes representatives of the fishing industry and conservation organizations around the nation.

A-2 Honolulu Star-Bulletin Thursday, Nov. 2, 1978

Political Whirl '78

what would most likely be a lower interest rate than they would otherwise be able to obtain.

Urges Fish Study

State Rep. John S. Carroll, a candidate in the 6th Senatorial District (Manoa-Makiki), says fishing in the Leeward Islands area should be halted until a management study is developed that "can produce abundant fish harvests for centuries to come."

In a speech to Kapiolani Community College students Carroll, a Republican, pointed out that a five-year, state-federal inventory of fishery resources is under way in the Leeward Islands area. He said fishing in that area should be halted until the research is completed.

Pacific Funding Needed

Panel on Fisheries Gets an Isle Earful

By Helen Altonn
Star-Bulletin Writer

An advisory committee on national fisheries programs and budgets recently visited Hawaii and became acutely aware that the Atlantic isn't the only ocean on the map.

Many of the officials, including Terry Leitzell, the federal government's chief fisheries executive, had never been to Hawaii and acknowledged that they knew little about the Pacific.

The Washington "provincialism"—as they referred to it—has resulted in an apathetic attitude toward Pacific fisheries problems and only a trickle of the millions of dollars spent annually on U.S. fisheries development.

"THE BIGGEST PROBLEM we face in Hawaii, and in other Pacific areas, is that we don't have a history of a fishery (such as salmon in the northwest)," said state Sen.

Star-Bulletin News Analysis

Wadsworth Yee, chairman of the Western Pacific Fishery Management Council, which hosted the officials.

"We have to convince the National Marine Fisheries Service that we have these resources and to give us the funds to develop them."

A lot of convincing was accomplished at meetings of the officials in Kailua-Kona. Yee even arranged a fishing trip to show some of them Hawaii's offshore fishing resources.

The group did not leave a blank check behind, but it did depart with a promise that closer attention will be paid to funding requests for Pacific fisheries development.

They left with a lot more knowledge of the Pacific area, and a warning that unless the U.S. does change some of its policies, it could lose the vast Pacific fish and mineral resources to foreign nations.

THEY ALSO LEARNED:

—That fishery problems in the Pacific "are real people problems" and not just vague words coming across their desks in paperwork.

—That the Pacific-wide demand for fish exceeds the supply, resulting in prohibitive prices, such as $8.50 a pound recently charged in local markets for onaga, a snapper.

Committee, which advises NOAA.

Charles Yamamoto, Hawaii sport and commercial fisherman, is a member of the committee. He said he tried for two years to turn the committee's attention to the Pacific, but his efforts had no impact until the members actually found themselves here in the middle of it.

Also attending the meetings were the chairmen of eight regional councils set up under the U.S. Fishery Conservation and Management Act of 1976.

The act established 200-mile fishery conservation zones and charged the councils with managing and conserving all marine and fish resources within the zones.

THE WESTERN PACIFIC Council represents Hawaii, Guam, American Samoa and the Northern Marianas and is drafting management plans for precious coral, spiny lobster, billfish and bottomfish within the 200-mile zones of those areas.

One of the stickiest problems of the 200-mile legislation is the exclusion of tuna from U.S. management on the basis that it is highly migratory. Thus, anyone is free to fish it in the U.S. zones.

However, it was pointed out that every other nation in the world, as well as the South Pacific areas, have claimed possession of tuna resources in their zones, putting them off limits to American tuna boats.

The U.S. policy reportedly has jeopardized fishery negotiations with Canada and with the South Pacific Fishery Management Agency, formed by island nations to manage their fishery resources.

Peter Reid, a vice-chairman of the Western Pacific Council from American Samoa (his uncle is governor) said American Samoa does not favor inclusion of tuna in the U.S. zone because its whole economy is based on tuna canneries, with the catch supplied by foreign nations.

But he said American Samoa is concerned about the U.S.-South Pacific negotiations. "We want to make sure that the islands to the north of us are not used as trade-offs for other purposes."

ONE PACIFIC OFFICIAL commented privately that "the tuna boats are selling out the Pacific basin for their own greedy interests."

—That Pacific areas are rich in resources but need federal help for research and development of programs, facilities and fishing vessels. Guam, for instance, doesn't even have a weather station, resulting in constant problems with drifting boats and rescue missions.

PACIFIC REPRESENTATIVES also pointed to growing conflict between South Pacific nations and the United States over fishing interests —a dispute that has international implications.

Russia, Korea and Japan reportedly are courting the island nations, vying with the U.S. for exploitation not only of fishery resources but potentially valuable mineral beds.

Leitzell, assistant administrator for fisheries in the National Oceanic and Atmospheric Administration (NOAA), said the Hawaii meetings were "critically important."

"We have an understanding of the concerns and interest in the fishing industry in the Pacific that we didn't have before," he said. "We will be less peripheral."

The meetings are expected to set the guidelines for national fisheries planning for the next three years.

AND HAWAII, GUAM and American Samoa, encouraged by the response of the Mainland delegation, hope to win a prominent place in the budget priorities.

Sen. Yee said the Western Pacific Fishery Mangement Council and the state will immediately begin drawing up specific proposals for funding consideration.

Participants in the Kona meetings included the 27 members of the high-level Marine Fisheries Advisory

Yee, Paul Bordallo, also a vice chairman of the Western Pacific Council from Guam, and Richard Shomura, director of the Honolulu Laboratory of the National Marine Fisheries Service, asked that the U.S. reconsider its position on tuna.

Leitzell said there has been talk that "we would be in a better position if we took jurisdiction...but I don't think we will do it. We feel the international way is the best way to manage the resource."

Shomura gave the fisheries delegates a slide-show presentation on the Pacific area, pointing out that five million people occupy thousands of islands and "they see tuna as a resource providing them with direct economic benefit. They don't care if it is highly migratory. When it is in their area, they feel it belongs to them."

Bordallo, brother of Guam's governor, noted that he has traveled extensively throughout the Pacific and knows the island leaders. "The time has come when America no longer can rely on the reservoir of good will developed in the South Pacific after liberation during World War II," he emphasized.

Like anyone else, he said, the island people "like to drive Toyota cars...They want modern fishing boats instead of old outriggers. They want to enjoy a better way of living."

HE PREDICTED critical problems for the U.S. if it doesn't treat the island nations as "equal partners" in development of their fishery resources, pointing out that they are being courted by Japan, Russia and Korea, which are offering them a better deal.

He said the Japanese have had full-page ads running in the Pacific Islands Monthly magazine saying they are a partner of Pacific fishermen.

"An ill wind is blowing in the Pacific," he said. "The people have rediscovered their identity and pride. They want to control their own destiny, land and resources, and it affects us, our people...

"The question is, is the Pacific community going to be affiliated, and with whom will it be affiliated? What is the U.S. role?

"IT IS NOT THE Japanese obstructing recognition of Pacific sovereignty," he continued. "It's the U.S., motivated by tuna interests."

He said American tuna fishermen, working 50 miles off New Guinea, "are the new pirates of the Pacific...feeding the American canneries in American Samoa. And New Guinea is not taking it lying down. They're getting gunboats and patrol boats. If there is that alienation, it goes beyond fisheries. What about mineral resources?"

The concerns about American tuna fishermen hit home with a lot of grumbling about the Pacific Tuna Development Foundation (PTDF), headed by Andrew Gerakas of the state Department of Planning and Economic Development.

Pacific officials complain that their areas are getting no benefits from the foundation's multi-million-dollar programs, that all of the money is going to West Coast tuna boats.

Conference Fails to Aid Isle Fisheries

Oct 28, 78 S-B

By Helen Altonn
Star-Bulletin Writer

KAILUA-KONA, Hawaii — Week-long meetings held here to acquaint national leaders in fisheries with Pacific fisheries' development problems ended yesterday with one official charging that the meetings were useless in helping Pacific island areas.

Pacific leaders also forecast troubles ahead for the United States because of an independent mood developing among Pacific people and a desire to control their resources and upgrade their living standards.

Edward P. Manary, a Washington state member of the Marine Fisheries Advisory Committee, said he felt the prestigious group should have taken some action to assist Hawaii, Guam and American Samoa after accepting their hospitality at the Kona meeting and listening to a plea for help with their fisheries' problems.

But just before the meetings adjourned he said, "I feel at this point that we haven't done a damn thing for them . . . We should take a position — go on record supporting them in any possible way we can."

Some of the other committee members disagreed. One pointed to the danger of supporting the "unknown." He said, "It's like saying we're in favor of motherhood and apple pie."

He asked for specific proposals from the Pacific areas for the committee's consideration.

THE COMMITTEE advises the National Oceanic Atmospheric Administration (NOAA) on marine and fishery affairs in the United States. It normally meets in Washington or on the East Coast. This was its first meeting in Hawaii.

Dorothy Soule, a committee member from California, said she was interested in holding the meetings in Hawaii "to get away from the provincialism of the meetings in Washington and the idea that the Atlantic is the only ocean."

However, she noted a number of people in the audience with Pacific expertise and said, "I'm afraid we haven't really made good use of them."

The Mainland officials agreed that the meetings were an eye-opener.

Terry Leitzell, NOAA's assistant administor for fisheries, said he felt the major product of the meetings was "an awareness, understanding and ability in the future, as the committee deals with various (specific) issues, to have sensitivity that many

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Kona Fisheries Conference Fails

Continued from Page One

of us realize we did not have before."

THIS WAS LEITZELL'S first look at Hawaii, and he said, "I fully expect to come back to the Pacific, and to come back soon. I think we've all learned a great deal, putting faces with names and understanding people in the area."

The advisory committee meetings were held in conjunction with meetings of the Western Pacific Regional Fishery Council and chairmen of the eight regional councils formed under the U.S. Fishery Conservation and Management Act of 1976 to manage and conserve fishery resources within 200-mile conservation zones.

The Western Pacific council, headed by state Sen. Wadsworth Yee, hosted the meetings at the Kona Hilton Hotel.

Yee said both the council and the state will respond to the committee's request for detailed proposals for Pacific fisheries' programs and funding. The state's recommendations will be part of a state master plan now being drafted for fisheries development in the Hawaiian chain up to Midway and beyond.

The Western Pacific council represents Hawaii, Guam, American Samoa and the Northern Marianas. Representatives of those areas gave the advisory committee a brief lesson yesterday in Pacific geography, resources and political problems in-

volving their fisheries.

THEIR PRESENTATION underscored the importance of the Pacific area to the United States in serious conflicts emerging in fishery policies.

Charles Yamamoto, Hawaii member of the committee, said in an interview that the Pacific area is a "hotbed" that is little known or understood in Washington.

Making matters worse, the Pacific people resent "federal bureaucracy," he said.

(Soule said she planned to urge the State Department to utilize Hawaii's talents in dealing with Pacific nations.)

Midway Fishing Proposals Asked

By Helen Altonn
Star-Bulletin Writer

Hawaii is seeking proposals from United States fishing interests to establish a fisheries base on Midway Island with prospects of tapping into a minimum $40 million albacore profit gleaned from the North Pacific by Japanese fishermen.

"We're trying to provide American fishermen with a certain logistical advantage by utilizing Midway," said Kenji Ego, chief of the state Division of Fish and Game.

"We're talking about millions of dollars in fishing potential."

The state Board of Land and Natural Resources Thursday authorized Ego to invite proposals for a one-year experimental albacore trolling project with limited use of Midway port facilities.

THE NAVY HAS given Hawaii a permit to use Midway as a fisheries base from Oct. 1, 1978, to Sept. 30, 1979.

Ego said "enough interest" has been expressed in the project to indicate that the state will receive a number of proposals for the trial albacore venture.

Advertisements seeking proposals will be placed in newspapers in Hawaii, California, Oregon, Washington and Guam.

Ego said the winning proposal will be selected by the state on the basis of "maximum economic benefit to the nation."

Hawaii hopes to receive a proposal from the local tuna industry, as well as from U.S. fishing companies, but Ego said the Navy has specified that the state can not discriminate against any fishing enterprise or partnership in the selection process.

THE PROPOSALS will be reviewed by his staff and a recommendation made to the land board for approval.

The agreement with the Navy will allow two mother ships of up to 1,300 gross tons each and up to 20 fishing vessels with a carrying capacity of up to 70 tons per vessel.

Only one tender vessel at a time will be allowed to anchor at Midway.

Ego said the arrangement will give American fishermen a big advantage over the Japanese because U.S. vessels will be able to transfer their catch to the mother ships, take on fuel, water and food supplies "and go out and get another load of fish."

HE SAID THE Japanese must replenish their fuel and supplies with open-ocean transfer operations which are "very dangerous."

Acting as "a middle man" between the Navy and the fishing industry, the state hopes to demonstrate the economic value of an albacore fisheries in the North Pacific to the United States and show that Midway can be used by fishermen without interfering with Navy operations.

Stressing that "big money" is involved, Ego noted that the Japanese take 30,000 to 70,000 tons of albacore annually from North Pacific waters.

He said albacore recently has been valued at $1,220 a ton and the price probably will be up to $1,300 by the time the Midway operation begins early next year.

"Even if we take the lower figure of 30,000 tons, we're talking about a resource of $40 million a year," Ego said.

"We want a share of that."

54 More Tons of Tuna Caught Off Midway

Three Jacks, a fishing vessel chartered by the Pacific Tuna Development Foundation, arrived here this weekend loaded with 54 tons of albacore caught in fishing grounds north of Midway.

The catch brings to 150 tons the amount of albacore hooked by the foundation's four vessels since they began trolling the Midway area in mid-May.

Andrew Gerakas, chairman and president of the Pacific Tuna Development Foundation, said the catch by Three Jacks and its sister vessels exceeds his expectations and comes at a crucial time since Hawaii's fishing fleet is having a poor tuna season in local waters.

Three Jacks is the fourth and largest vessel participating in the tuna foundation project. Its companion boats fishing in waters off Midway are the Cornucopia, Jinita and Typhoon.

After unloading, the Three Jacks will return to Midway to fish the North Pacific grounds until the project terminates in mid August, Gerakas said.

HONOLULU ADVERTISER Saturday, February 4, 1978 A-11

Coral bed found near Nihoa

A new bed of precious coral was discovered recently about 320 miles northwest of Honolulu, it was announced yesterday.

Richard Grigg, a coral expert, said the new bed may be the largest of its kind within the 200-mile limit of Hawaii.

He said the new coral find, which is located on a bank 40 miles northwest of Nihoa Island, is much larger than the commercially mined coral bed off Makapuu.

The discovery of pink and gold coral was made Jan. 22 by Mike Palmgren, a University of Hawaii grant researcher, in cooperation with the National Marine Fisheries Service.

The coral was taken from a depth of 400 meters in a bed estimated to be about five square miles. It was hauled aboard the National Oceanic and Atmospheric Administation vessel Townsend Cromwell.

The Townsend Cromwell returned to Honolulu last week for a stopover before heading out to probe the ocean depths off Midway Island.

Researchers aboard the vessel are studying the resources of the Northwest Hawaiian Islands.

A-18 Honolulu Star-Bulletin Tuesday, Oct. 17, 1978

Isle Tuna Fleet Gets OK to Use Midway

Gov. George R. Ariyoshi and the Navy have signed an agreement that will allow the state to use the facilities of Midway Island to support its tuna fleet.

The agreement, signed by Rear Adm. R.S. Wentworth, commandant of the 14th Naval District, is for a one-year trial period. It will allow fishermen to dock a "mother ship" with freezer facilities at Midway to receive tuna catches from as many as 20 fishing vessels.

As part of the agreement, Island fishermen using the area would have to avoid contact or interference with the Hawaiian Monk seal, seabirds, sea turtles and other wildlife in the area.

The governor said the agreement will make it possible for "U.S. fishermen to tap the rich tuna resources discovered near Midway."

'Cold day' remark gets chilly reception

WAILUKU — A regretted remark about "a cold day in hell" resulted in a hot day on Maui for Wyoming Rep. Teno Roncalio during the last of a series of hearings on the proposal for a reparations study commission.

Even before the hearing opened, Roncalio sought to clarify his remark, made during Thursday's hearing in Honolulu. He said the reference was to a claim to 2.5 million acres made by John Agard as representing the amount of land due native Hawaiians.

Roncalio said he responded: "It will be a cold day in hell before you get that much land." But he also said the record on his statement was unclear.

In any case, he said, the claim for 2.5 million acres, or 65 percent of all the land in the state, "is not a worthy request."

His remarks drew considerable adverse comment from a number of persons, who questioned his apparent attitude towards the claims of native Hawaiians.

At one point, he told Charles K. Maxwell of Maui that if the comment "shocked you into reality," then it had served its purpose.

Maxwell responded by commending Roncalio on being candid.

Then Maxwell presented Roncalio with a lei, which he said was made of the droppings of goats on Kahoolawe.

Roncalio said he accepted the contempt shown by Maxwell. But Roncalio also said if he had told the Hawaiians "I would help you get 2.5 million acres, I would be a liar."

He said he spoke with a realization of the mood of Congress, which would not accept the claims being made by the Hawaiiians.

"I regret the words. They were not good words that a politician would make," Roncalio said. "But they spoke the political truth."

Later Roncalio told The Advertiser he could make no estimate of the amount of land reparations acceptable to Congress. But he said Hawaiians should be more concerned with the quality of the land they receive as reparations rather than the quantity.

He noted that water was necessary to provide for usable land, citing experience in his home state of Wyoming where lack of water renders large amounts of land unuseable.

Roncalio: If I'd said I'd help get 2.5 million acres, I'd be a liar.

4-3 Honolulu Advertiser 4/10/78

Hawaiians ask action, not 'study'

By EDWIN TANJI
Advertiser Maui Bureau

WAILUKU — The congressional proposal for a 15-member commission to study native Hawaiian claims drew mixed reviews yesterday during a public hearing held on Maui by a U.S. House subcommittee.

While no one disputed the Hawaiian right to reparations because of the 1893 overthrow of the Kingdom, there was testimony questioning the language providing for a study commission and even over its need.

Maui County Corporation Counsel Paul Mancini, representing the county administration, and Stephen Morse of Puna on the Big Island both disputed the need for a commission to further study native claims.

Charles Maxwell of Maui and Sam Kealoha of Oahu both disputed the intentions of Congress in calling for another study.

Maxwell said the attitudes expressed by subcommittee Chairman Teno Roncalio, D-Wyo., indicated Hawaiians may need "to follow in the footsteps of the Red Man and the Black Man" and turn to public demonstrations.

Kealoha, speaking mostly in Hawaiian and addressing the audience behind him rather than the chair, said U.S. rule in Hawaii was illegitimate and his organization, Ohana O Hawaii, has made a complaint to the United Nations.

Others, testifying generally in favor of the study commission, still questioned changes made by a House committee to the original proposal prepared by the Senate. The changes questioned were a provision for only seven rather than nine members of the commission to be of Hawaiian ancestry and the removal of language that acknowledged the United States assisted in the revolution that overthrew Queen Liliuokalani.

Mancini said the proposal for another study will lead to no further knowledge, no further revelations . . . but will lead to further delays and frustration."

Roncalio cited "the mood of Congress" in defending the additional study in place of a concrete proposal for reparations. But Mancini called for "action, not study and some provisions for a land award."

Advertiser photo by Edwin Tani

Sam Kealoha, speaking in Hawaiian, claims U.S. rule is illegitimate.

In a similar vein, Morse said a study commission "would only be delaying matters."

He urged that Congress either have a joint congressional committee meet with an elected negotiating committtee of Hawaiians to settle on claims or take action now on some form of reparations.

Kahala Ann Trask Gibson, of Hana, and Francis "Manu" Goodness of Kahului both criticized the hearing because information on the bills under consideration had not been readily available.

Gibson also questioned the removal of language in the reparations commission bill that previously acknowledged the injustice to Hawaiians in the overthrow of the queen.

After Roncalio had urged that Gibson prepare maps showing which lands are being claimed, or were suitable for claims, Marvin Ching of Keanae cited the Keanae and Wailua valleys on Maui as two areas that should be included in reparations to Hawaiians.

Alma Cooper of Hilo also presented testimony from her husband, Alika Cooper, that supported a return of the Leeward Islands of Hawaii as part of the reparations. The Cooper testimony was directed specifically to another bill being considered providing for the Leewward Islands to be included as federal wilderness lands.

Cooper's testimony also was supported by Rick Gaffney, a Maui ocean recreation consultant, who said the Leeward Islands should be removed from the wilderness bill and returned to native Hawaiians.

In her testimony, Alma Cooper urged that Congress "give back our land and give full compensation for American imperialist actions . . . Give back what was taken away from us 85 years ago, no more and no less."

While emphasizing that native Hawaiians were seeking to reclaim only what was taken in the 1893 revolution, Cooper noted that one of those areas being claimed is Pearl Harbor. She said Pearl Harbor was provided to the United States prior to 1893 by treaty, but the treaty was never renewed after 1893.

Other testimony focused on the need for land reparations.

Adolph Helm of Molokai, citing the "aloha aina" (love for the land) concept, said Congress could provide $2 billion in reparations to all the Hawaiian people. But he said that was not as important as the return of land.

Richard Kinney suggested all of the original crown lands, totalling about 1.5 million acres, rightfully belong to the Liliuokalani Trust.

Anchors Aweigh

BOUND FOR FRENCH FRIGATE SHOALS . . . the lobster boat "Keola" left Nawiliwili Harbor yesterday afternoon on a six-week expedition. In the boat's nine-member crew are a few Kauai boys, including State Fisheries worker Brian Kanenaka of Lihue. The "Keola" will be cruising along the Leeward Hawaiian Islands in search for lobsters.

SEA GRANT NEWSLETTER

in this issue:

STUDENT SYMPOSIUM
SEE PAGE 4

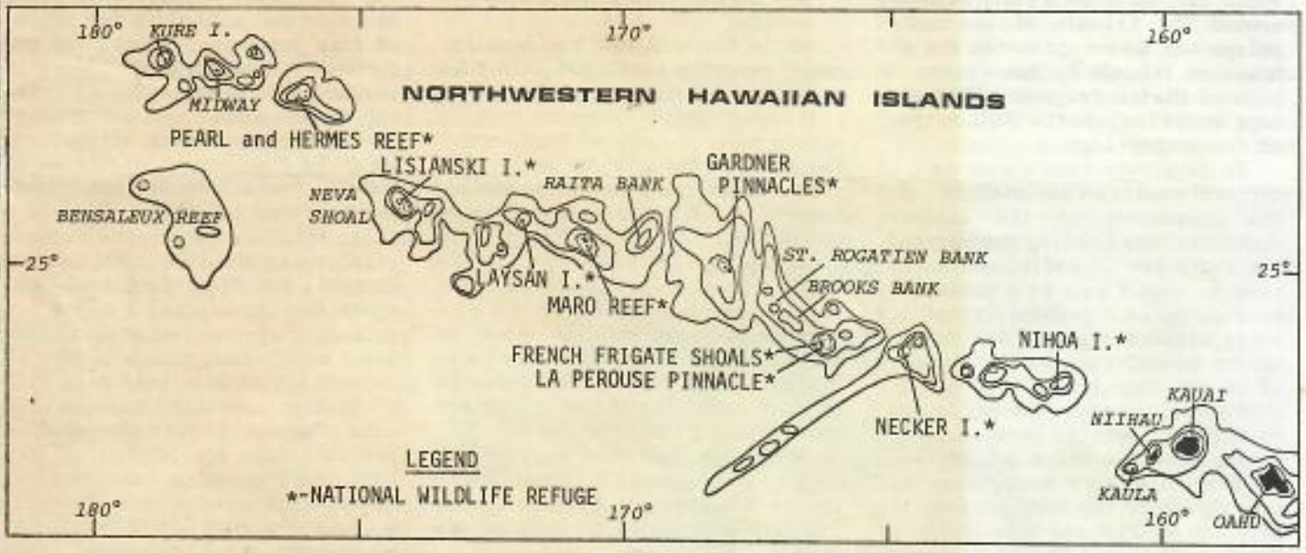
Sea Grant Newsletter Volume 8, Number 1 January 1978

The complex scenario of the Northwestern Hawaiian Islands is accentuated by the multi-agency involvement in their management. The article that follows is a composite of the information obtained by interviewing individuals of the five institutions which have or are projecting an involvement in the development of resources.

The cooperation of Kenji Ego, Chief, Fisheries Branch, State Division of Fish and Game; Robert Skillman, coordinator of the Northwestern Hawaiian Islands study, National Marine Fisheries Service; Henry Hansen, Hawaii Administrator, US Fish and Wildlife Service; Wilvan Van Campen, Executive Director, Western Pacific Regional Fishery Management Council; and Richard Grigg, coordinator for the proposed University of Hawaii Sea Grant project, is gratefully acknowledged.

"an idea whose time has come..."

northwestern hawaiian islands provide potential for fishery development



The Northwestern Hawaiian Islands (NWHI) consist of 1,200 miles of the 1,600-mile Hawaiian Archipelago. To date, the islands have remained pretty much isolated and untouched by human activities. Part of the reason lies in the action taken in 1909 by Theodore Roosevelt who designated the islands as a national wildlife refuge.

This action limited entry to the islands of Nihoa, Necker, Laysan, and Lisianski; French Frigate Shoals; and Pearl and Hermes Reef, except as granted by the US Fish and Wildlife Service which has management responsibilities over the refuge.

To add to the jurisdictional complexity, the US Coast Guard has jurisdiction over Tern and Green Islands. Midway Island is part of the US naval defense area and not a part of the Hawaiian Islands.

Recently, the state of Hawaii has turned its attention to the NWHI for two principal reasons:

1. The enactment of the Fishery Conservation and Management Act of 1976 which created a 200-mile extended jurisdiction zone
2. The increasing pressures on the marine resources of the principal inhabited islands

The Fishery Conservation and Management Act proclaims US jurisdiction and ownership of the living resources within the 200-mile zone which needs to be monitored for unlicensed foreign intrusion. In addition, the Act calls for a plan to manage the non-migratory species of fishes and other living resources. A further concern is the possible impact of the Act on the UN Law of the Sea Conferences.

Approximately 300,000 square miles of marine real estate was added to the state of Hawaii under the 200-mile jurisdiction zone. The right of the state to govern the waters within the 3-mile boundary still remains in effect. However,

(Continued on page 2)

NORTHWESTERN HAWAIIAN ISLANDS PROVIDE POTENTIAL FOR FISHERY DEVELOPMENT (Continued from page 1)

the federal government has extended its boundaries from the previous 12-mile contour to 200 miles seaward.

The extension of the boundaries has raised the question of jurisdiction over the channel waters. Are the channels international waters? Or does the state of Hawaii have a case if it were to claim ownership over the waters by promoting the archipelagic regime over the waters.

The inability of the UN Law of the Sea Conferences to come to consensus on what the regime ought to be for the ownership of the discovered and yet undiscovered resources of the oceans of the world provides nations the license to continue to hammer out "interim" nationally oriented laws which will soon, if they have not already done so, have the force of precedence.

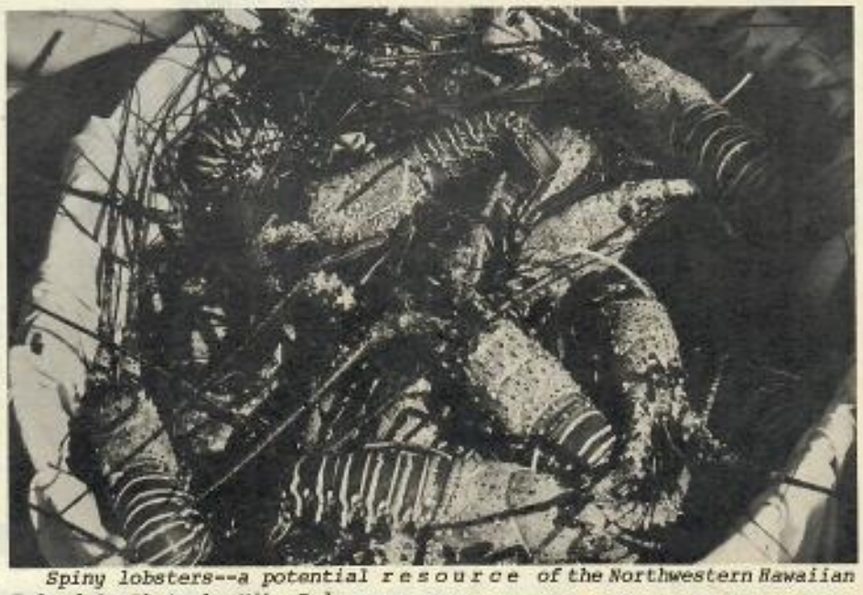
The archipelagic regime which would circumscribe a state boundary around the islands of the archipelago has been promoted for the Hawaiian Islands by John Craven, UH Dean of Marine Programs. This concept would include the NWHI as part of the archipelago.

It is within this context of certainty built on uncertainty that the governance of the extended fisheries zone is being promulgated. The state has an additional incentive to move forward positively because of the probability of its being allowed to govern its coastal waters beyond the 3-mile boundary if it can demonstrate wise management policies and procedures founded on solid scientific bases.

The agencies which are involved in examining the management and control of the NWHI include the Division of Fish and Game (State of Hawaii), National Marine Fisheries Service (Department of Commerce), and the US Fish and Wildlife Service (Department of the Interior).

Under what is called informally, the tripartite agreement or plan, the three agencies have designated aspects of a joint study of the resources of the NWHI:

- NMFS is to study the marine resources from the 10 fathoms contour outward, including the pelagic resources within the 200-mile zone
- State Division of Fish and Game is to study the nearshore coastal waters to the 10 fathom mark
- US Fish and Wildlife Service will study the land-associated resources, including land habitats of marine animals, such as the monk seal and green sea turtle.



Spiny lobsters--a potential resource of the Northwestern Hawaiian Islands? Photo by Mike Palmgren.

While there is need for development, everyone connected with the agencies involved is careful to state that any development must be within the context of "wise use." The NWHI are the home of vast colonies of sea birds and other wildlife, some of which are considered to be endangered.

According to Kenji Ego of the Division of Fish and Game, "The initial assessment is that there are development possibilities in fisheries and other resources. However, such development needs to be done carefully so that there are no mistakes."

A similar note of caution was voiced by Robert Skillman, NMFS, who is his agency's liaison to the tri-agency planning group on the NWHI.

NMFS is charged with the study of determining what resources can be developed and the impact of such development on the resource.

According to Skillman, "Harvesting is not harmful to wildlife." The limits for harvest must be set at a rate that will allow for renewal of the resource. Hence, the need for basic biological data of the resources to be harvested is critical to management and development.

Commercial and recreational uses and the enforcement of the Marine Mammal Protection Act are principal concerns of NMFS. Because of this, NMFS has been the research platform in the NWHI. The *Townsend Cromwell* has been the vehicle utilized for the studies being conducted. With one cruise down, there are three more scheduled for the current fiscal year and two in 1979.

Studies conducted to date indicate a potential for commercial and recreational development of the NWHI. NMFS research has identified substantial populations of:

- Spiny lobster
- Snapper and groupers, about 6 species, such as opakapaka (*Pristimpmoides microlepis*) and ehu (*Etelis marshi*)
- Kawakawa (*Euthynnus yaito*)
- Jacks, 2 or 3 species

(Continued on page 3)

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JACK DAVIDSON
Director

ROSE PFUND
Editor

MARINE ADVISORY PROGRAM

Sea Grant College Program U of H

HAWAI'I IN HARMONY WITH THE SEA

HE'E AND 'ŌLEPE - OCTOPUSES AND SHELLFISH

by Jeremy Harris

There are three main types of mollusks in Hawaii that are protected by fishing regulations. There are the octopuses, or he'e, the clams, and the oysters. It is surprising to many that these three seemingly very different animals are related at all, but indeed they are all mollusks belonging to the same phylum Mollusca.

The ancient Hawaiians had hundreds of different uses for the mollusks they found in local waters. Some were used as food and others for medicine, while shells of many were made into jewelry. There is no doubt, however, that one of the most important mollusks to the ancient Hawaiians was the he'e or octopus.

HE'E IN OLD HAWAII

Present day Hawaiians often make the mistake of refering to the he'e as squid. It is, in fact, not a squid at all but an octopus. The squids, although closely related to the octopuses, are quite different animals that usually live in the open ocean and are free swimming, unlike the octopus which lives on the bottom and hides in holes in the rock and coral. The ancient Hawaiians knew the difference between these two animals quite well, and called the squid by the name mūhe'e.

HE'E AND HE'E PULOA

There are two common species of the he'e that live on the reefs here in Hawaii. These are he'e, (*Octopus marmoratus*) often called "day squid," and he'e puloa, (*Octopus ornatus*), referred to as "night squid." The he'e is usually a greyish brown color, while the he'e puloa or long headed he'e is usually a dull reddish color with white stripes on his head and white spots on his tentacles. Both types, however, can change their color to blend in with their backgrounds.

There has recently been discovered a new species of octopus found on the Hawaiian reef flats. It is small in adult form with a crescent shaped dark brown and white mark below the eyes, with star shaped suckers. It is as yet unnamed.

Both the he'e and the muhe'e were very important to the ancient Hawaiians, and they were often made 'aumakua or personal gods. Octopuses were also frequently used as medicines in those times. The name he'e, in fact, means to drive away a malady. Many of the chants of the old kahuna contain references to this amazing creature, the he'e.

Both kinds of he'e live in holes in coral heads on the reef or in shelters built from loose pieces of coral. Often the octopus will crawl into its hole and then place a piece of coral across the opening. The shelters that the he'e build are usually found where the bottom is of coral rubble and sand.

The he'e will collect broken pieces of coral and pile them in such a way that there is a cavity in the middle. Both the he'e and the he'e puloa are extremely intelligent creatures.

The octopus protects itself from predators in a very unusual manner. When the he'e is threatened it will emit a large amount of purple-black ink which clouds the water and provides camouflage for its escape.

The maximum life span of the two common species is about 1 to

(Continued on page 2)

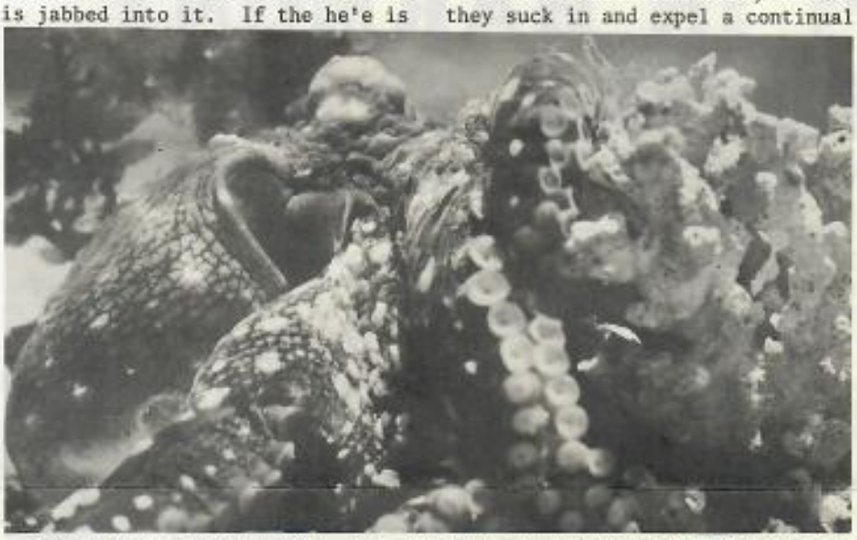
The octopus is often mistakenly called "squid" in Hawaii. The differences between these two animals are obvious in the above photograph. The creature on the left is an octopus while the one on the right is a true squid.

HAWAII IN HARMONY WITH THE SEA *(Continued from page 1)*

1½ years of age. Females die after hatching eggs.

FISHING FOR HE'E

The best time to fish for he'e seems to be between the months of June and December, with the months of September and October being particularly good. In the daytime, the he'e is caught by walking along the reef and looking for holes with crab shells cluttering the entrance. When a he'e hole is found a stick is jabbed into it. If the he'e is inside, he will come out and can be grabbed or speared if he is of large enough size.



OCTOPUS ON A CORAL HEAD. The octopus is a master of camoflage and can change its color to match its background.

At night, he'e puloa can be caught by torching on the reef. In this manner, octopuses can often be found sitting exposed on the bottom where they can be grabbed or speared. The fisherman should exercise care in grabbing octopus with bare hands, since they may bite. Once the he'e is caught it can be killed in the old Hawaiian method of biting it between the eyes or its head can be turned inside out.

CONSERVATION OF THE HE'E

Because the he'e is such an important resource, we must be careful to conserve it. Although the season for he'e is open year around, there are regulations on the minimum size that can be caught. *Both the he'e and he'e puloa must be at least one pound before they can be taken!* By letting the animals mature before they are caught, the fisherman is allowing them to reproduce and insuring a constant supply of octopus in the future. Although there are no regulations on the number of he'e that can be taken, the wise fisherman will follow the practices of the ancient Hawaiians and only take a few he'e from the "squiding" grounds at a time.

'ŌLEPE-CLAMS AND OYSTERS

The clams and oysters found in Hawaiian waters are all bivalves having two shells that can be opened on a hinged point. These bivalves or 'olepe use their muscular foot to burrow into the saft mud or sand bottom of Hawaiian bays. These animals are filter feeders, in that they suck in and expel a continual stream of water and filter out the tiny organisms and food it contains. Because they are so popular with the residents of Hawaii these tasty animals have had a great deal of fishing pressure put on them and, therefore, they are protected by regulations.

CONSERVATION OF CLAMS AND OYSTERS

The season for clams is presently closed year-round on the island of Oahu, and will remain so for an indefinite period of time until the populations can rejuvenate themselves. In all other counties the clamming season is only open from 7:00 a.m. on the first Monday of September through the last day of October. *In order to be of legal size, clams must measure at least one inch across the widest part of the shell.* Fishermen can only take one gallon of clams with shells per person per day, and they cannot use any digging implement that is longer than 18 inches or wider than 6 inches. All of these restrictions only apply to clams in the wild and not to those raised in private ponds or aqua culture farms.

The native pearl oyster (*Pinctada galtsoffi*) is also protected by fishing regulations. There is no open season for this oyster and it is unlawful to take them at any time.

INTRODUCED SHELLFISH

Several different kinds of shellfish have been introduced into Hawaiian waters, and it is unlawful to take, sell, or be in possession of any of them from State waters without a special permit.

These are: eastern oyster (*Crassostrea virginica*), Japanese oyster (*C. gigas*), coral rock oyster (*C. amasa*), top shell (*Trochus* sp.), abalone (*Haliotis* sp.), cherrystone clam (*Mercenaria mercinaria*).

Be certain to learn and follow these basic conservation rules and practices the next time you go fishing. Remember, only if you obey today's kapu system will you have he'e and 'ōlepe to catch tomorrow.

OYSTER BEDS. Because of reduced populations, there is presently no open season for taking the native pearl oyster (Pinctada galtsoffi).

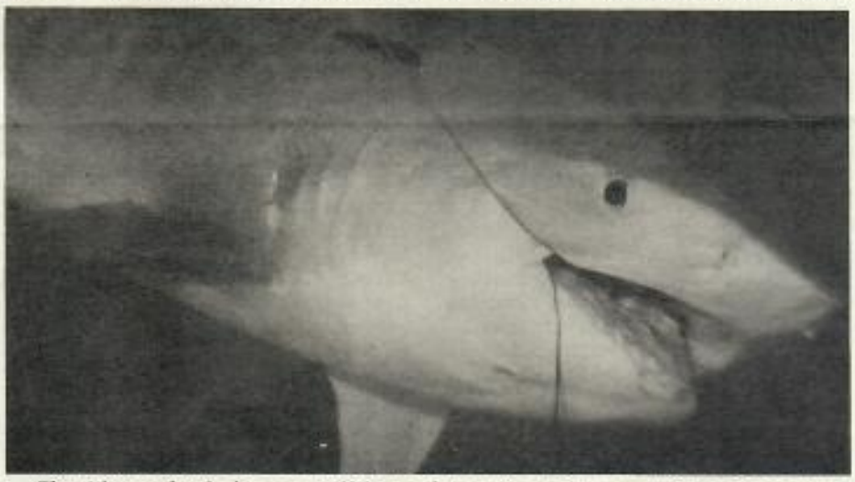
NORTHWESTERN HAWAIIAN ISLANDS PROVIDE POTENTIAL FOR FISHERY DEVELOPMENT

(Continued from page 2)

Within the fishery management zone, especially around the Hancock Seamount, about 180 miles off Kure Islands, a large fishery of armorheads has been located. These are bottom fish which are unfamiliar to the American public and require a method of fishing not commonly used by Hawaiian fishermen. The state is looking at the possibilities of developing the recreational fisheries. Favorites of sports fishermen, jacks and ono are abundant in the NWHI. Active negotiations with the US Navy are currently proceeding to establish a fishing station on Midway Island.

The US Fish and Wildlife Service is land-based and yet because the animals that live on the islands within the wildlife refuge derive food from the ocean, the water portion of the refuge is an integral part of the total ecosystem.

Henry Hansen, of the US Fish and Wildlife Service, considers a 3-pronged thrust in research as being vital. "What is the extent of the living resources of the NWHI? What is there? What are the ecological groups?"



The tiger shark is a possible predator of marine mammals and sea turtles in the Northwestern Hawaiian Islands. Photo by Dr. Leighton Taylor.

The Service is concerned with the lobster fishery because it is known that monk seals eat them. To protect the seals, regulations to limit taking of the lobsters are part of the proposed overall management plans for the NWHI. Among other regulations lobster taking is not allowed within the 10-fathom contour shoreward of those islands which are monk seal habitats.

Other than the three agencies directly involved in the study, management, and monitoring of human activity in the NWHI, the Western Pacific Regional Fisheries Management Council, charged with the development of management plans for the NWHI, is another body which enters the picture. For example, the Council is developing a management plan for lobsters. The membership of the council is made up of qualified individuals who are "knowledgeable or experienced with regard to the management, conservation or recreational or commercial harvest, of the fishery resources of the geographical area concerned." Wilvan Van Campen, the Council's executive director, stated that "the Council manages as yet undefined resources and so must tread a thin line."

Of interest to sport fishing enthusiasts is the regulation governing the taking of billfish by foreign fishermen with narrower zones of protections governing Hawaii and the Western Pacific. The zone of protection along the mainland US coasts is 100 miles. In the Pacific, the zones vary:

- 50 miles off the principal Hawaiian Islands
- 12 miles off the NWHI, Guam, and Samoa

Guam is protesting the 12-mile limit, but the Council is not taking a "hard line" stand, according to Van Campen.

Proposed Sea Grant Study

There is an urgency beginning to be felt within those sectors of the state concerned with the marine resources which are now within the state. The eleventh hour is fast approaching when decisions will need to be made by the state to chart the course of the future of the NWHI and its resources.

The prudent use of the resources of the NWHI is the stated goal of all agencies involved in the management or study or monitoring of this valuable portion of the Hawaiian Archipelago. The development of this area will double the number of sites available to Hawaiian commercial and recreational fishermen because of the abundance of submarine shelves in the NWHI.

Although the day-to-day monitoring and management planning efforts are being conducted, there is general agreement among those involved with the NWHI that a need exists for more information to develop plans for management and possible harvest of these resources.

"An idea whose time has come" is Richard Grigg's assessment of the need for a multi-faceted, multidisciplinary study of the NWHI resources. "There is no comprehensive, systematic investigation of the fertility of the island archipelago," said Grigg. "Managers of the resources need to know what the basic productivity is. How much biomass is the system capable of producing?"

Preliminary plans for a broad scale study are being coordinated by Grigg under the auspices of the University of Hawaii Sea Grant College Program.

The study calls for support from Sea Grant and the Office of the Marine Affairs Coordinator, in cooperation with NMFS, Western Pacific Regional Fisheries Management Council, Maui Divers of Hawaii Inc., and the University of Washington Sea Grant College Program.

Species-specific projects will seek biological and ecological information on bottom fisheries, sharks, green sea turtles, precious corals, lobsters, shrimp, and pelagic nehu.

A comparison of the ecology of reefs surrounding the main islands with that in the NWHI and the effect of currents and other oceanographic conditions on the population genetics of several commercially valuable species are other studies being proposed.

The socioeconomic-legal component will assess the impact of the NWHI resources on the current and future economy of the state. Information critically needed by decisionmakers will be provided by this effort.

The cooperative inter-agency venture, possibly the most extensive effort to date under Sea Grant, coordinates the concerns and needs of interests which have some "business" in the NWHI. Projected

(Continued on page 4)

THIRD ANNUAL SECONDARY STUDENT SYMPOSIUM WILL BE HELD AT THE UNIVERSITY OF HAWAII

About 200 high school students from throughout the state will meet on the Manoa campus of the University of Hawaii to participate in the third annual Secondary Student Symposium on Marine Affairs on January 13, 1978.

The symposium is sponsored by the University of Hawaii Sea Grant College Program in cooperation with the State Department of Education and the State Office of the Marine Affairs Coordinator.

Thirty-two students who have written research papers will be presenting them on one of eight panels at the symposium. These panels, scheduled in two sections of four panels each, will be repeated twice during the day.

Four papers written by students from Kubasaki High School in Japan will also be presented.

Student research papers will be presented on the following panels:

COASTAL ZONE MANAGEMENT: Vicki M. Shigekane (University Laboratory High School), "Coastal Zone Management: Kaneohe Bay"; Daria K. Young (Sacred Hearts Academy), "The Coastal Zone Management Program of Hawaii 1974-77"; Arno. L. Hawman (Pahoa High School), "Shoreline Boundaries and How They Affect Us"; Clarence Blizzard III (University Laboratory High School), "Sewage Treatment Plants on Oahu"; Melanie J. Stanphill (Kubasaki High School, Japan), "Is Metal A Pollution?"

MARINE RESOURCES: Doris S. Kwan (Kubasaki High School, Japan), "The Pearl: The Gem of the Sea"; Maia Chang (University Laboratory High School), "Precious Corals in Hawaii"; Letitia K.S. Dang (Sacred Hearts Academy), "Precious Corals of Hawaii."

PRAWN AQUACULTURE: Leslie R. Kop (Sacred Hearts Academy), "Prawn Farming in Hawaii"; Wendell M. Hino (University Laboratory High School), "Aquaculture: The Problems, Potential, and Developments in Raising *Macrobrachium rosenbergii*"; Dianne F. Kiyabu (Sacred Hearts Academy), "Aquaculture: Prawns in Hawaii"; Judith D. Seo (University Laboratory High School), "Aquaculture: Solution to Fish Disease and Waste and Increase of Seafood Supply."

ALTERNATIVE MARINE ENERGY SOURCES: Anjulie C. Fong (Sacred Hearts Academy), "Ocean Thermal Energy Conversion"; Lisa M. McPherson (Pahoa High School), "OTEC: An Alternative Source of Energy at Ke-Ahole"; Edward R. Souza and Tracy M. Ban (Honokaa High School), "Hydrogen: Dream Fuel of Hawaii's Future."

OCEAN ENGINEERING: Scott D. Snider (Pahoa High School), "How the Island of Hawaii Can Acquire A Decompression Chamber"; Dean K. Aoki (Lahainaluna High School), "Hope I: The Wave of the Future"; Keith Kanetani (Hilo High School), "Tsunamis in the Hawaiian Islands"; Alison M. Miyashiro (University Laboratory High School), "Is Tsunami Protection Adequate in Hawaii?"

RECREATIONAL FACILITIES: Lee H. Taylor (Lahainaluna High School), "Problems in Choosing the Location of a Boat Ramp in Lahaina"; Lester W.K. Luahiwa (University Laboratory High School), "Paddling and Swimming at Ala Moana Beach Park"; Glenn S. Kishi (Lahainaluna High School), "The Future of Lahaina Harbor"; Arlene Bazell (Pahoa High School), "Richardson Center, Hilo, Hawaii."

MARINE BIOLOGY: Allen I. Hori (Waimea High School), "The Effect of Palytoxin from *Palythoa vestitus* on Raji Cells"; Derrick J. Ignacio (Pahoa High School), "The Sea Urchin in Hawaii"; Wayne C. Plumline (Kubasaki High School, Japan), "Sharks"; William L. Krumpelman III (Kubasaki High School, Japan), "Crown-of-Thorns (Relation to the Far East Region)"; Bridget J. Kennealy and Gordon N. Okamura (Pahoa High School), "Photoreception and Behavior Pattern in Hermit Crabs."

OPTIONS IN AQUACULTURE: Francine J.L. Kaneta (Sacred Hearts Academy), "Aquaculture: A Potential Impact"; Lana L. Watanabe (Aiea High School), "The Eel Controversy"; Scott T. Tsutsui (Pahoa High School), "Seaweed: Vegetation from the Sea"; Lyle M. Miyasaki (Lahainaluna High School), "Hawaiian Aquaculture: Bright Future."

FISHERY *(Continued from page 3)*

costs are nearly $.85 million per year of which the funding request being made of the UH Sea Grant College Program is slightly in excess of $.4 million. In-kind and other support total about $.45 million.

The coordinated research team will collaborate and cooperate on data acquisition so that the complex ecosystems of the NWHI can be studied without duplication of costs and efforts. The University-based research team will focus its scientific and technical talent on discovering and developing the vital pieces necessary for the development of an informational matrix needed by resource managers for rational decisionmaking.

How fast and to what extent information gaps are closed depends on level of funding--a perennial limiting factor to research projects.

University of Hawaii
Sea Grant Publications
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Room 253, Spalding Hall
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GEORGE H. BALAZS
JR. MARINE BIOLOGIST
HIMB
COCONUT ISLAND

SEA GRANT NEWSLETTER

in this issue:

Sea Grant Newsletter Volume 8, Number 4 April 1978

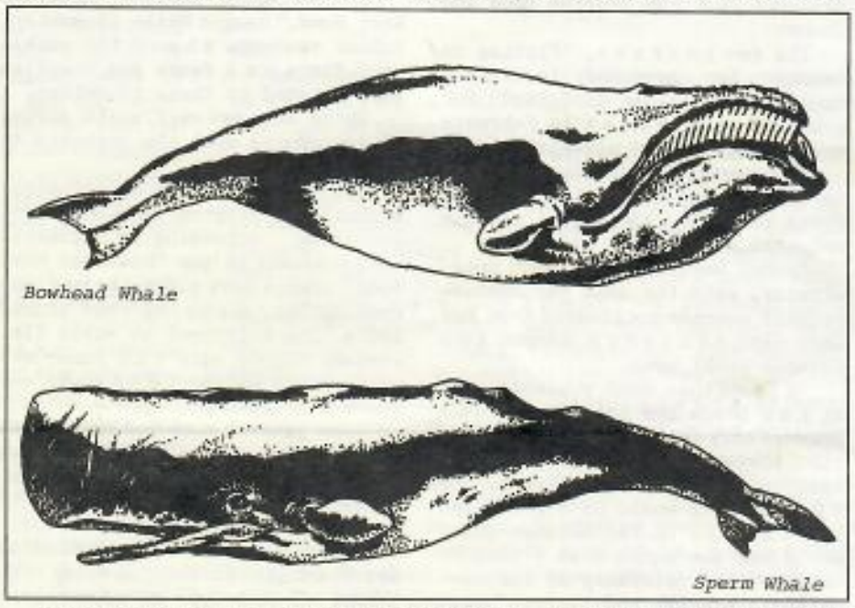
part two: the move to become scientifically responsible

THE IWC--A REGULATORY BODY

by Patsy T. Mink, Assistant Secretary of State for Oceans, International Environmental and Scientific Affairs

The second half of the two-part article, which follows, by Assistant Secretary of State Patsy Mink, is one of the clearest statements on the role and function of IWC. Based on the conventions under which the IWC must function, the critics' expectations of the Commission appear to exceed its functional boundaries, that of regulation and management rather than the banning of whaling. Mrs. Mink points out the awkward position in which the US found itself with regard to the Eskimo-bowhead whale issue when it attempted to obtain an exemption for the Eskimos to hunt bowhead whales, especially since the bowhead whales are an endangered species.

Mrs. Mink's contribution to the Sea Grant Newsletter *is gratefully acknowledged. Her drive and dedication which typically characterized her service as a member of the Congress remain undiminished and have carried over to the office of Assistant Secretary of State for Oceans, International Environmental and Scientific Affairs.* (The Editor.)



Bowhead Whale

Sperm Whale

The bowhead whales, an endangered species, is a source of controversy which has not yet been resolved. The Eskimos won the right to continue subsistence harvesting for one year in spite of the recommendation against such harvesting by the IWC Scientific Committee. The increase in the harvest quota of sperm whales has been pointed to as the trade-off to enable the Eskimos to continue to kill bowhead whales.

The United States has fought aggressively since the New Management Plan took effect to keep big-power politics out of the International Whaling Commission by urging adoption of all Scientific Committee recommendations based on the New Management Plan. The US has strongly emphasized the importance of relying on biological data for the setting of yearly quotas, and has specifically urged ratification of the Scientific Committee's recommendations.

Recently the decision taken at the special December 1977 meeting of the IWC in Tokyo on the North Pacific sperm whale quota has caused new criticism to be leveled at the IWC. In fact, all the IWC did was to adopt the Scientific Committee's recommendation as it was expected to do.

By way of background on this issue, in June 1977, at the regular meeting of the IWC, the Scientific Committee recommended that the North Pacific sperm whale quota be cut from the 1976 quota of 7,200 to 763 for 1977-78. Since the data used to determine this quota were questioned, it was decided that members should review it and if a revision was deemed necessary a special meeting of the Scientific Committee would be called to agree on a new quota.

Accordingly, the Scientific Committee met on November 21-26 in Cronulla, Australia. The Committee unanimously agreed to raise the quota for North Pacific sperm whales to 6,444. In attendance were scientists from six countries (Australia, Canada, Japan, United States, the United Kingdom, and the USSR), among them the world's most knowledgeable sperm whale experts.

The great fluctuation in the quota (7,200 to 763 to 6,444), which is the source of the criticism, results from changes in the mathematical values applied to the formula. Through a series of calculations based upon a new analysis of the data, the population level

(Continued on page 7)

FISHY COURSES LURE WAIANAE COAST STUDENTS

A new and experimental educational program, Ho'i Ana I Ke Kai (Return to the Sea), will give students on the Waianae coast of Oahu the opportunity to use the ocean as their classroom.

This Sea Grant-funded project involves students from Waianae High School and Maile Elementary School in two courses designed to increase student awareness of the sea as a potentially valuable natural resource that can provide food and income.

The two courses, "Fishing in Hawaii" for secondary-level students and "Hawaiian Reef Food" for grades 4 to 6, began in February and will run through mid-April 1978.

These programs were incorporated in the school curriculum and students in the high school program received one science credit.

Isabel Hacskaylo, project coordinator, said the idea for marine-related courses originated from her work with students around the Waianae coast area.

"I found that many students were at the beach and not in school because they felt the type of education they were getting was not relevant to them," said Hacskaylo. "So I felt that it would be a good idea if schools on the Waianae coast would use the ocean as a tool to increase the relevancy of the educational process and improve overall scholastic achievement."

The courses were developed in conjunction with the Waianae Hawaiian Heritage Cultural Center. Because of questions of liability, the Department of Education does not sanction "in-water" activities. Therefore, the seagoing portion was conducted as a voluntary component to the lectures and practicum in the classroom.

In the "Fishing in Hawaii" course, 34 students received 25-1/2 hours of classroom lecture and 12 students, divided into two sections of six each, participated in 34 hours of basic fishing technique. This involved hands-on activities such as bait cutting, lure tying, fish identification, and three fishing trips aboard the sports fishing boats *Kamalii Kai II* and *Sticks and Stones*.

This course was taught by Al Yamamoto, a lecturer at Leeward Community College who has been a commercial fisherman for 11 years.

The second course, "Hawaiian Reef Food," taught Maile Elementary School students about the edible reef flora and fauna and Hawaiian lore related to these resources.

There were two reef walks during this course with the emphasis on hands-on learning.

The results of this experimental educational program were very encouraging. According to Hacskaylo when students in the "Hawaiian Reef Food" course were given their final examination, many of them scored 100's. The principal at Maile Elementary School said the student's performance on the tests was way above his expectation.

"The general response we've been getting from the students has been enthusiastic," said Hacskaylo. "This is the way courses should be taught in the Waianae area."

A proposal will be submitted to Sea Grant to further develop the thrust of this type of educational program, particularly for coastal areas where there are students who are not reached by regular educational programs.

These mini-projects will be evaluated by Dr. James Brough of Kamehameha Schools. The development of all test instruments and both the formative and summative evaluations will be done under his direction.

Ho'i Ana I Ke Kai was begun under an early start grant of $3,000 from Sea Grant. Principal investigator of the project is Rose Pfund.

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JACK DAVIDSON
Director

ROSE PFUND
Editor

conference calls

The University of Rhode Island Center for Ocean Management Studies will be holding their second annual conference on the University of Rhode Island campus from June 19 to 21, 1978.

This conference will focus on how marine policy decisions are made. This will be followed by sessions on jurisdictional complexity, information needs for decisionmaking, public opinion influence on marine policy decisions and the decisionmaking process.

The conference is sponsored by the University of Rhode Island Center for Ocean Management Studies.

For further information contact Dr. Timothy M. Hennessey, 204 Washburn Hall, University of Rhode Island, Kingston, RI 02881 or call (401) 792-5801.

CALL FOR PAPERS

The Sea Grant Association has issued a call for student abstracts of graduate student research for the 1978 Sea Grant Student Awards.

Graduate students should consider abstract topics that support the Sea Grant concept as reflected in the Association's purpose "to further the optimal development, use, and conservation of marine and coastal resources, and to encourage increased accomplishments and initiatives in related areas." Students are also encouraged to submit abstracts relating to any of Sea Grant's functional areas such as research, education and training, or advisory services.

Abstracts will be judged on the quality of research, its ability to show how the work is important to man's use of the seas, and clarity of presentation.

The Association has developed guidelines to aid students in preparing his or her abstract and to provide the selection committee with uniform criteria for judging each paper.

Graduate students in Hawaii can obtain a copy of the abstract guidelines from the UH Sea Grant office on the Manoa campus, Spalding Hall Room 253, 2540 Maile Way, Honolulu, Hawaii 96822. Graduate students in other states should contact the Sea Grant office in their respective states.

The deadline for submitting an abstract to the president of the Sea Grant Association is May 1, 1978.

UNIVERSITY OF HAWAII
SEA GRANT COLLEGE PROGRAM

MARINE ADVISORY PROGRAM

April 1978 Sea Grant Newsletter

SMALL MOTORBOATS FOR HAWAIIAN WATERS

by Peter L. Hendricks

A good portion of the 10 million or so recreational boats in the United States are motorboats from 19 to 25 feet in length. This brochure discusses boats in this category and provides a few tips for the buyer of a small motorboat for the first time, or for the boater who is thinking of changing boats and wondering which to buy. Although this brochure is written primarily for Hawaiian small motorboatists, most of the information can be used by small motorboat owners the world over.

the marine environment

Hawaiian waters are dominated by the tradewinds which blow about 85 percent of the time from the northeast. Close to shore, the waters of the windward (northeast) sides of the islands tend to be rougher and rainier while the leeward sides are smoother and drier. But weather can range from relatively windless areas like the inshore Kona coast of the Big Island to consistent afternoon tradewinds of over 20 knots in Alenuihaha Channel, and from glassy smooth days in Keehi Lagoon on Oahu to 8 to 10-foot seas in Molokai Channel. On the open sea, exposed to the full force of the tradewind system, especially interisland channels, wind and sea often combine to make boating rough going. If you are disabled on the open sea, you will probably be on your own, at least for a while, and you must be prepared with a sound boat and adequate safety equipment. If you happen to be blown west of the islands, there is almost nothing but ocean for several thousand miles.

Most Hawaiian waters, including channels and harbors, are of sufficient depth so that draft (depth of boat beneath the water) is not a problem in choosing a boat. You usually don't need to cross sandbars and surf to get back to the harbor.

Wind velocity and wave height and length in the area of operation are major factors to consider when choosing a boat. Waves are often spoken of as (1) swells, which are waves spaced far apart, or (2) chop, meaning short, steep waves caused by strong local winds.

things to consider when buying a boat

The use or function of a boat should be determined ahead of time. Because different activities require different types of boats, the owner will save time looking for a boat if he decides first whether it will be used for waterskiing in Keehi Lagoon, for a fishing trip from Oahu to Penguin Banks, etc. As one old mariner put it, all boats are compromises and the owner does best by deciding first how he is going to use his boat. The fewer types of activities required from a boat, the better.

HULL

Hull design is the first important consideration in choosing a boat after determining the desired function of the craft.

With the almost infinite variety of shapes available through fiberglass boat construction, it is difficult to define specific hull categories today. In the days of wooden small boats, the differences were more pronounced. Now there is a subtle progression from the flat bottom skiff to the radical deep V ocean racer. For the boat buyer, the function intended should determine the form of the hull. A good thumbrule to use when looking for a boat is to choose one with the least amount of deadrise possible for the function intended and for the local waters. This relates to speed, stability, carrying capacity, and seagoing ability.

Displacement hull

Approximately the same amount of the hull of this type of boat is in the water when moving as when at rest. A classic example of a displacement hull designed for local conditions is the "sampan" hull with its high, narrow bow for easy entry into short, steep Hawaiian seas (Figure 1). Since most of the underwater portion, or "wetted surface," of a displacement hull stays in the water, the speed of the boat is theoretically limited to the speed of a wave of the same length as that of the hull. For example, a 25-foot boat is limited to about 7 mph.

Figure 1. Sampan

The displacement hull craft is relatively slow, but offers the advantages of larger carrying capacity and more stability in rough weather than some of the other hull types, as well as better fuel economy. Its low center of gravity (Figure 2) adds to stability, but the boat will roll in a swell, both underway and at rest. If you spend much time off the exposed, wind-

Figure 2. Displacement hull

ward coasts of the state or in interisland channels, this type may be for you. Displacement hull boats are usually larger than 25 feet overall, but there are some good choices in the 19 to 25-foot range.

Planing hull

Most small recreational motorboats today have what is called a "planing hull." The planing hull is designed to rise up out of the water on an initial burst of power (thus escaping the "hull speed formula") and then skim over the water, rather than push its way through the water (Figure 3). At one extreme, the unlimited hydroplane racing boat has only the outboard skegs, the rudder, and the prop in the water. Much more of your own boat will be in the water, even at top speed. The combination of powerful, lightweight marine engines, strong, lightweight boat-building materials, mass production, and relatively low cost have made this hull type the dominant one for US small motorboats.

Figure 3. Planing hull

Four types of planing hulls are (1) flat bottom, (2) V bottom, (3) deep V, and (4) cathedral, gull wing, or tri hull.

Flat bottom. This is the simplest of boat hulls (Figure 4). Basically a box with a pointed end (bow), the skiff or jon boat comes in a variety of sizes and shapes. It is relatively cheap and easy to build and is able to carry lots of weight for its size. It is fine for protected waters, but pounds badly in rough, choppy seas and has trouble holding its course in rough weather. Its biggest advantage, which is good lateral stability in calm water (not much tipping, called heel), becomes its downfall in rough water.

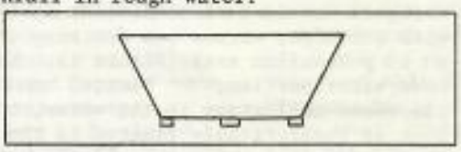


Figure 4. Flat bottom

V bottom. This modification of the basic skiff usually has a hard chine (junction of bottom and side) running from the bow to the transom (stern) and a relatively flat bottom. The deadrise (angle of bottom from keel to chine) is steep at the bow for easy entry, but shallow aft for planing (Figure 5). This combination allows the boat to cut through the water cleanly and still get up and plane on the flat bottom aft. In rough weather the relatively flat bottom will pound, and in severe weather speed must be reduced far below planing speed for safety and comfort. In a following sea, there is danger of broaching. This happens when the high, flat stern of the V bottom catches a wave and the sharp bow digs in, slewing the boat broadside to the seas.

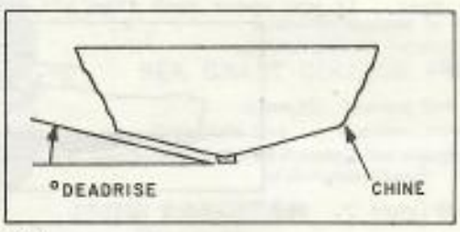


Figure 5. V bottom

The V bottom hull is good for relatively protected waters. It is roomy and fast, and dry until the chop builds up a bit. Also, it is relatively stable when at rest; something to think about if you spend much time at anchor or drifting, e.g., bottom fishing.

Deep V. This hull type evolved from the V bottom and was modified for speed and comfort on the open sea. A hull with a deadrise of approximately 20 degrees or more is considered a deep V. The hull shape below the waterline continues in almost the same form from bow to stern (Figure 6). Small steps, or strakes, form mini-planing surfaces as the boat rises up with speed. Given enough power, this hull type is soft riding and fast, even in heavy seas, but tends to be unstable at slow speeds. It is not a good hull for very small boats and has less accommodation space than its beamier relatives. Generally, the higher the deadrise in the deep V hull, the more power required to run it efficiently. At slower speeds it is a real gas eater.

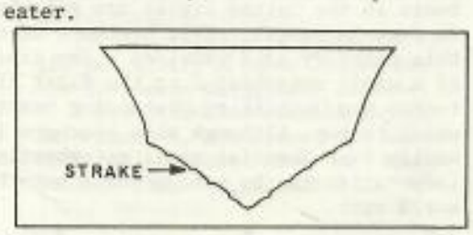


Figure 6. Deep V

You have lots of products to choose from in the range between the V bottom hull and the deep V hull, including a semi-V hull, which is merely a compromise between the two.

Cathedral, gull wing, or tri hull. This hull shape is a compromise between the seagoing ability of the deep V and the stability of a beamier hull (Figure 7). Two shallow V's alongside the central V allow stability both underway and at rest. Boats with this hull shape are roomy, comfortable, and fast. But more curves and surface area mean more weight, hence a heavier hull and more power needed to push it. And the cathedral tends to pound and be a very wet boat in very rough weather.

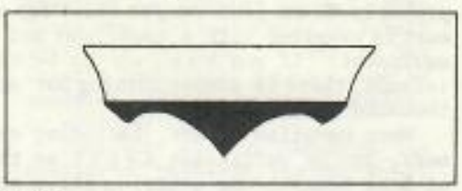


Figure 7. Cathedral

POWER SOURCE

In the 19 to 25-foot boat range you have a choice of outboard, inboard, and inboard-outdrive engines.

Outboard

This specialized marine engine, whose available horsepower ranges from 1.5 to over 200, is the most common means of propulsion for small boats. It is versatile, has a good horsepower to weight ratio, and does not require holes in the hull for propeller shafts, etc. The outboard does require a relatively low transom, however, and this can be a problem for the boat in a following sea with the possibility of swamping from the rear. All boats are designed for a specific horsepower range (look for it on the Boating Industry Association/Coast Guard certification plate). Probably the biggest mistake new boatowners make is to hang too big an outboard on the stern. The outboard can be raised out of the water, a great advantage if

you leave the boat in the water for any period of time. Outboards, however, do not stand up well if run for long periods at continuous slow speeds.

Inboard

For a long, narrow displacement hull craft where weight aft would be wrong, the inboard engine is usually the choice. In addition, the continuous running at slower speeds, the inboard engine is the best. In recent years, smaller and lighter marine diesels have been developed which are becoming popular for small boats. Some are also being installed on planing hull crafts.

Inboard-Outdrive (IO)

The IO engine combines advantages of both inboard and outboard engines. The engine is solidly placed inside the stern, leaving more working and storage room forward, and is ideal for a broad-sterned, high-speed boat. The propulsion unit which is placed on the transome can be raised out of the water.

other considerations

The hull type and power source are major decisions you will make in the choice of a boat, but there are lots of other things to consider before and after purchasing the boat. Some of these are mentioned below.

Quality and Condition

Buying a "proven design" from a reputable marine dealer is your best bet to avoid poor quality. Most boats on the market today will give you good service, but don't shop for the "cheapest" one. It may turn out to be very expensive.

A few dollars for a marine survey of a used boat is a good investment. A boat usually represents a sizeable investment for the individual, and it helps to have an independent, professional evaluation of the vessel. You can find a list of marine surveyors in the yellow pages of the phone directory.

Title

Make sure you get a proper "bill of sale." You will need it to register the boat and receive an identification number (shown on the bow) from the state of Hawaii. You will also need to register the trailer, if any.

Outfitting

After you purchase the boat and power source, you can easily spend half as much again on other gear--lifesaving equipment, electronics, fishing tackle, etc. Take this into account as you plan the financing of the vessel so you won't be shocked later when you try to complete the equipment inventory.

Maintenance

Whether you choose a fiberglass, aluminum, or wooden boat, you can expect certain maintenance costs, usually higher than you think. Fiberglass is the most popular material for small motorboats; it requires little maintenance compared with wood. Aluminum also requires little maintenance, but aluminum boats make up only a small part of the boating population in Hawaii. The engine and other equipment used on the ocean will deteriorate much faster than your other belongings. Trailers have been known to rust out in two years (helped by total neglect). More maintenance is usually required on marine hardware than on similar items ashore. Boat maintenance has to be figured in terms of both your time and money.

Insurance

You will need insurance for your boat and trailer in storage, on the road, and in the water. Check your auto policy for coverage on trailers and towing. Many homeowners policies include liability coverages for boats under 26 feet, having outboard engines with less than 25 hp or inboard engines with less than 50 hp. Liability insurance covers injury to persons and property caused by you and your boat. Hull insurance can be purchased for the boat itself to cover damage or loss. If you use your boat for commercial purposes, e.g., diving charters, you will need special insurance. There are numerous insurance agencies in Hawaii which handle marine insurance. Check with one for your particular situation.

Value

New small motorboats are somewhat like cars. They depreciate the moment you hitch the new boat and trailer to your car and drive away from the showroom. However, good quality boats retain good resale value after initial depreciation. A "name brand" used boat in good condition is a good investment, too. You will probably trade up (or down) in several years anyway, especially if this is your first boat. Since marine boating is a "way of life" rather than a hobby, your requirements for a boat will probably change as you gain more experience.

Facilities

Launching facilities for trailered boats are limited in some areas, and mooring facilities throughout the state have waiting lists. Before you buy, find out where and how easily you can get your boat in and out of the water, and how to keep it there if it must be moored.

Safety

There are federal boating safety requirements for all boats within the United States. Get a copy of these from the Coast Guard. These requirements apply to construction standards as well as safety equipment which must be carried on boats. Look for the Coast Guard/Boating Industry Association Certification/Capacity Information Plate on most motorboats under 20 feet. This plate gives information to help the boater avoid overloading and overpowering.

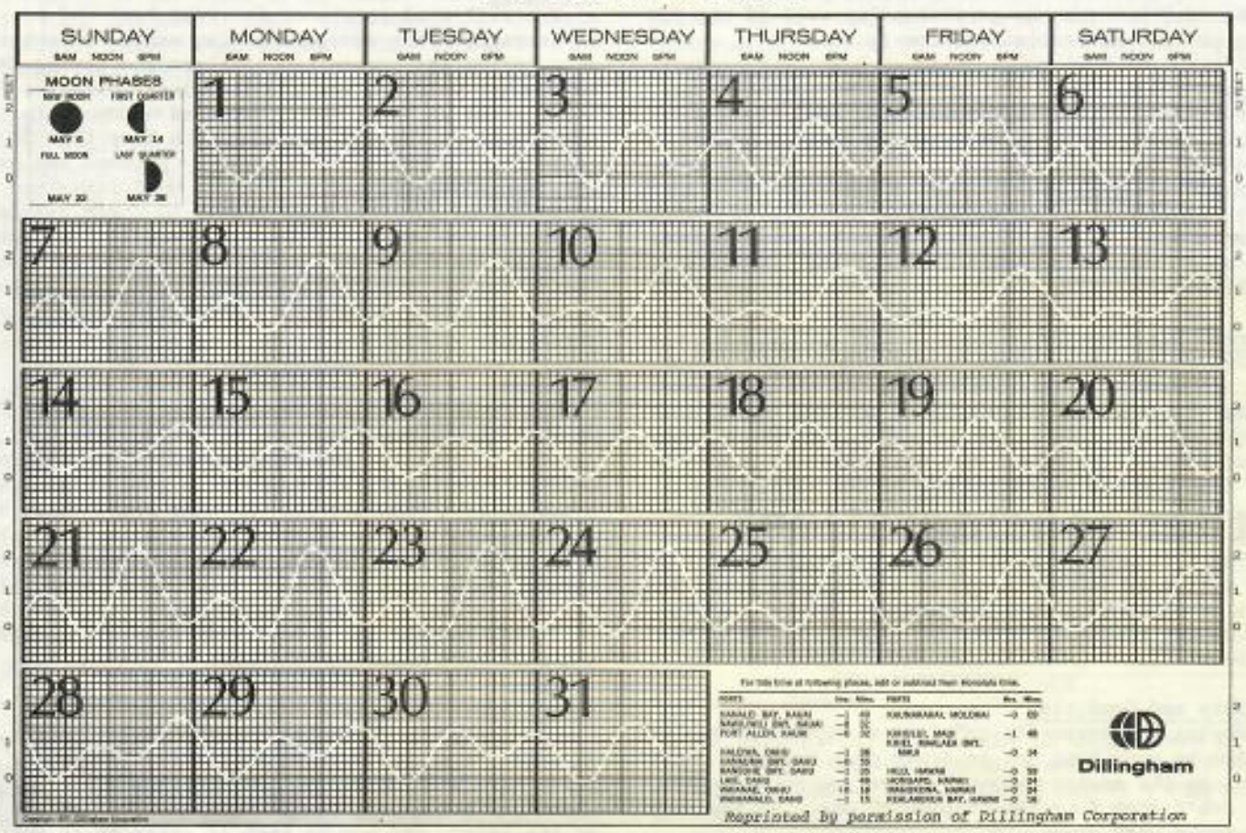
Boating Courses

If you are a new boater, you will learn by experience, some of it painful, but take advantage of all the available information ashore first. The US Coast Guard Auxiliary (USCGA) offers several educational programs for boaters, including "Boating Safety and Seamanship," an excellent beginner's course in boating. The US Power Squadron and the Red Cross have boating courses, too.

summary

There are many good brands and models of boats available. For more complete information on subjects mentioned in this brochure, visit the Hawaii Public Library which has a good selection of titles under "Boats" and "Boating." When all is said and done, the buyer must decide which type of boat is best for his or her purposes. Don't be afraid to ask experienced skippers what they think. Before you decide, however, be sure to take a demonstration ride, preferrably under several weather conditions. Boats often act contrary in the water than what you might expect from their appearance on land. But, when you do decide, good luck and safe boating.

MAY 1978 TIDE CHART



map calendar of events

A series of lectures sponsored by the UH Sea Grant Marine Advisory Program, the Waikiki Aquarium, the Marine Affairs Coordinator's office, and the Hawaii Academy of Science will be presented by experts on topics about the Pacific marine environment. The lecture series, designed for the general public, will include movies and slides. Admission is free. All lectures on Oahu begin at 7:30 p.m. and on the outer islands at 7:00 p.m.

OAHU

Lecture	Waikiki Aquarium (Wednesday)	Leeward Community College (Thursday)	Kaneohe Library (Wednesday)
"Man and the Atoll Ecosystem," by Jan Newhouse, General Science Professor, UH	April 12	April 13	April 19
"Wildlife and Geology of the Hawaiian Leeward Island Chain," by George Balazs, Marine Biologist, Hawaii Institute of Marine Biology	April 26	April 27	May 3

OUTER ISLANDS

Lecture	HILO Hilo Community College Rm. 394-1 (Friday)	KONA Kona Surf Kam. Room (Saturday)	MAUI Maui Community College Rm. 12-A (Friday)	MOLOKAI Kaunakakai School (Saturday)	LANAI Lanai School Humanities Rm. (Sunday)	KAUAI Kapaa Library (Friday)
"Hawaiian Coral Reefs: How They Grow, What Lives There," by S. Arthur Reed, Zoology Professor, UH			April 28	April 29	April 30	May 26
"Fish, Sharks and Other Friendly Forms of Reef Life," by Leighton Taylor, Jr., Director, Waikiki Aquarium	April 28	April 29	May 26	May 27	May 28	

THE IWC--A REGULATORY BODY *(Continued from page 1)*

of male sperm whales was estimated to be higher than previously projected. The difference in population was enough to move the male stocks from a "protected" level of zero to a "sustained yield" category allowing the take of 5,105 males, the major component in the enlarged sperm whale quota. It should be noted that criticism of the Japanese data has been circulated in a paper by Dr. Sidney J. Holt of the United Nations Food and Agriculture Organization. Obviously more work has to be done. The North Pacific sperm whale quota might well change again, as new data are again submitted to the next meeting of the IWC in June 1978.

Other current worldwide stocks of sperm whales exist in the North Atlantic and in all nine divisions of the Southern Hemisphere. Quotas for 1977-78 in each of the management areas are:

North Atlantic		North Pacific	
Males	685	Males	5,105
Females	685	Females	1,339

Southern Hemisphere		
Division	Males	Females
1	303	101
2	808	
3	941	312
4	566	0
5	536	177
6	276	92
7	234	130
8	874	290
9	0	0

In the same aforementioned June 1977 IWC meeting, the Scientific Committee recommended the removal of the aboriginal exemption for the bowhead whale which had been in effect since the inception of the Treaty. This recommendation was unanimously adopted by the IWC. (The US abstained in this vote.) Since 1972 the Scientific Committee had each year expressed grave concern over the increasing number of bowhead whales being taken by the Alaskan Eskimos. Each year the US was specifically instructed by the IWC to take some remedial action to protect the bowheads. The US government neglected to heed this warning by the IWC.

The IWC action caught the Eskimos completely by surprise. They agreed that there were abuses and volunteered to work with the government to structure a conservation and research program, provided that the US would help them find a way to continue taking the number of whales actually needed for subsistence purposes. The US agreed and petitioned the IWC Scientific Committee to reconsider the bowhead whales issue at the special sperm whale meeting in November 1977. No one denies that the bowhead whales are an endangered species. It was so when the Treaty was written and it is still so today. However, IWC regulations had always provided exemptions for aboriginal consumption, and the IWC limited its regulations to cover only commercial whaling. The June 1977 decision cutting off Eskimo subsistence hunting of the bowhead whale was therefore a major new direction. The US took its appeal to the November meeting of the Scientific Committee. The Committee ignored the US petition and voted to reiterate its June recommendation of a zero quota, noting that the cultural and subsistence issues raised by the US petition were outside their competence to decide. The US petition suffered a serious setback.

The number of bowhead whales taken by Alaskan Eskimos in the Western Arctic Ocean by year from 1930 to 1977 are:

1930	7	1946	11	1962	12
1931	12	1947	10	1963	10
1932	7	1948	5	1964	16
1933	5	1949	5	1965	6
1934	4	1950	9	1966	13
1935	6	1951	13	1967	4
1936	8	1952	2	1968	16
1937	9	1953	23	1969	18
1938	4	1954	4	1970	24
1939	6	1955	23	1971	24
1940	5	1956	5	1972	38
1941	11	1957	3	1973	37
1942	11	1958	2	1974	20
1943	6	1959	1	1975	15
1944	2	1960	19	1976	48
1945	6	1961	10	1977	29

(Figures taken from Environmental Impact Statement)

Since 1974 the US, having strongly supported the position that the Scientific Committee's recommendation should be ratified by the IWC, found itself hardpressed to justify its case for special circumstances for the Eskimos' subsistence needs.

The IWC in December 1977, however, grudgingly agreed to allow a limited subsistence hunt of bowhead whales for one year only. The Alaskan Eskimos are to be allowed to take only 18 whales struck or 12 whales landed, whichever comes first. The IWC recommended further that the taking or killing of calves or cows with calves be prohibited; that the US implement programs of conservation and scientific research on bowhead whales; and that "all necessary measures be taken to preserve the habitat of bowhead and beluga whales." The United States is to report back to the IWC in June 1978 with the results of these programs. The Alaskan Arctic bowhead hunt begins in April and ends in early June each year. Efforts are under way to implement this decision of the IWC. Although the 12 whales quota is only half of their subsistence requirements, the Eskimos have indicated their willingness to cooperate.

The International Whaling Commission is moving towards becoming scientifically responsible. Many difficulties such as inadequate data, lack of staff, and need for time to make better analysis still plague the work of the Commission. It must be admitted that the International Whaling Commission as presently constituted can never meet the expectations of the environmental community, which will hold to no less than total cessation of all whaling, regardless of the stock levels.

The IWC is now made up of sixteen nations: Australia, Argentina, Brazil, Canada, Denmark, France, Iceland, Japan, Mexico, the Netherlands, New Zealand, Norway, South Africa, the United Kingdom, the USSR, and the United States. Most joined when they were still whaling nations. Today only six of the member nations still whale commercially. In recent years the IWC has added three nations (Brazil, New Zealand, and the Netherlands), leaving five whaling nations (Chile, Peru, Republic of Korea, Portugal, and Spain) that are not members. Those five whaling nations account for roughly 10 percent of the total catch, and it is important that the US continue to press for their entry into the Commission.

Until there is in existence a universal international organization which is composed of all nations to conserve our whales, it will not be possible to bring to bear the full force of the conservation movement's goal of total prohibition of commercial whaling.

Lacking such an organization, we must continue to work within the IWC mechanism and try to make it a more effective organization. It must be acknowledged that the IWC has succeeded at least in preventing any more species of whales from becoming endangered or threatened with extinction.

FISHERY CRUISE TRAPS 79 SHARKS

The National Oceanic and Atmospheric Administration research vessel *Townsend Cromwell* returned on March 9 to Kewalo Basin in Honolulu after a fishery assessment cruise to the Northwestern Hawaiian Islands.

According to Thomas Hida, chief scientist on the cruise, 40 days were spent investigating fishery resources and monitoring environmental conditions in an area extending from Nihoa Island to Midway Islands and the Hancock Seamount.

Research activities included trapping for spiny lobsters and bottom fish and handline fishing for bottom fish.

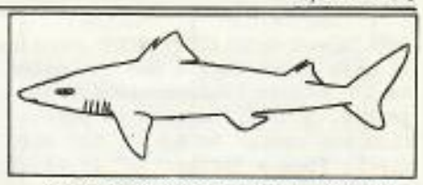
One of the highlights of the cruise was a catch of 79 dogfish (*Squalus fernandinus*), a species of shark, in four fish traps set in 150 fathoms (900 feet) of water on the Hancock Seamount.

This was the first time that such a large number of dogfish were caught in one area.

Although dogfish do not have any commercial value in Hawaii, they are widely used in the fish and chips trade in England, said Hida.

Also on this cruise was Mike Palmgren from the University of Hawaii Sea Grant College Program and Susan Rasmusen, Vernon Hu, and Alan Kam from the Hawaii Institute of Marine Biology.

With the cooperation of scientists aboard the *Cromwell*, Palmgren conducted dredging operations for precious corals while Rasmusen, Hu, and Kam fished for sharks in inshore waters to investigate shark predation on sea turtles.



Dogfish (Squalus fernandinus)

The *Cromwell* also transported Brian and Patti Johnson, a husband and wife scientific team, to Laysan Island where they will conduct a six-month study on the behavior of monk seals. Craig Harris of the Fish and Wildlife Service returned from Laysan Island to Honolulu on the *Cromwell* with nine live Laysan finches for study.

In addition to Hida, the scientific party aboard the *Cromwell* included research assistants Glenn Higashi, Robert Humphreys, Martina Queenth, and Darryl Tagami.

regulation 44 now in effect

Honolua and Makuleia Bays on the island of Maui have been declared marine conservation districts by the Board of Land and Natural Resources.

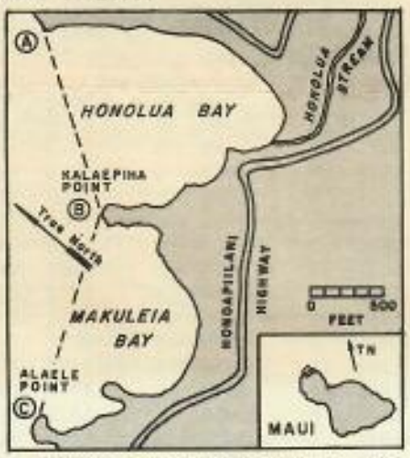
Regulation 44, which became effective on March 16, 1978, prohibits the taking of all marine life in and around the submerged lands and overlying waters of the bays.

The boundaries of the conservation districts extend in a straight line from a point on the northern side of Honolua Bay to Kalaepiha Point on the southern end of Honolua Bay and to Alaele Point on the southern end of Makuleia Bay.

A provision within the regulation permits the use of the existing boat ramp at Honolua Bay for the launching and retrieving of boats which fish outside the conservation districts.

Also, with a permit from the Division of Fish and Game, akule may be bagged in Honolua Bay. However, these fish must be caught outside the conservation districts before being brought into the bays.

A copy of regulation 44 is available at all Division of Fish and Game offices.



Boundaries of the Honolua and Makuleia Bay conservation districts.

new film available

A film entitled "BEYOND HONOLULU: The Northwestern Hawaiian Islands" is now available to all interested individuals, schools, and colleges through the Hawaii Geographic Society.

This film is available on a rental basis from the Society for $20 plus return airmail postage, or can be purchased for $395 plus postage.

There is no rental fee for schools.

This color sound film runs for 25 minutes and tells the story of the Northwestern Hawaiian Islands.

For more information contact Willis H. Moore, President, Hawaii Geographic Society, P.O. Box 1698, Honolulu, Hawaii 96806 or call (808) 538-3952.

University of Hawaii
Sea Grant Publications
2540 Maile Way
Room 253, Spalding Hall
Honolulu, Hawaii 96822

GEORGE H. BALAZS
JR. MARINE BIOLOGIST
HIMB
COCONUT ISLAND

Tern to Take a Turn When It's All Settled

By Helen Altonn
Star-Bulletin Writer

The Coast Guard is expected to cease operations on Tern Island in July 1979 and the state and federal governments both have plans for it — diametrically opposed plans.

The state wants to establish a fisheries base on the island and the U.S. Fish and Wildlife Service wants to turn it back to the wildlife for research purposes.

The question is: Who owns the island?

Tern Island contains about 21 acres of the 65 acres in French Frigate Shoals. It's part of the City-County of Honolulu, 500 miles northwest of Oahu in the National Wildlife Refuge.

The island was omitted from the federal wilderness proposal encompassing the rest of the refuge system because of changes to the environment through Navy and Coast Guard occupation.

"THE INDICATION we have is that Tern Island is the property of the state," says John Craven, state marine affairs coordinator.

"The Coast Guard got it from the state and if it leaves it should come back to the state."

However, U.S. Fish and Wildlife Service officials say the Territory of Hawaii acquired Tern Island improperly.

"The Navy transferred Tern to Hawaii following the war, but the Navy never had it to give," said J. Brent Giezentanner, National Wildlife Refuge manager.

He gave this historical account of the island:

In 1909, the so-called "Hawaiian Islands Reservation" was given to the U.S. Department of Agriculture by order of the president.

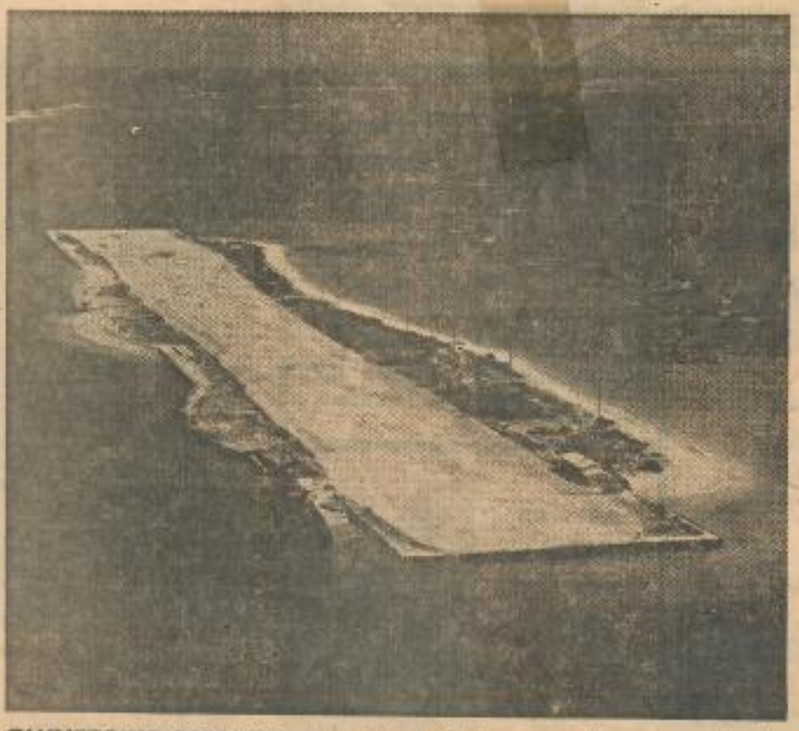
Through subsequent reorganization within the federal government, conservation areas all over the nation were taken out of the agriculture department and given to the U.S. Department of Interior.

In 1940, the name of the Hawaiian Islands Reservation was changed to the Hawaiian Islands National Wildlife Refuge.

The Navy occupied Tern Island during the war and then transferred it to the Territory of Hawaii in the early 1950s.

THE TERRITORIAL Department of Agriculture issued a permit to the Coast Guard for a LORAN (long-range aid to navigation) facility.

Giezentanner said, "The key to the whole thing is that there are no documents that transfer the area from the Department of Interior to Department of Navy jurisdiction so the Navy could give it away."



OWNERSHIP DISPUTE—Tern Island will be vacated next year by the Coast Guard and the state and federal governments are both claiming it.

"Our legal people feel we're on very solid ground (in claiming the island)," he said. "Until we're proven wrong in court, we will maintain jurisdiction and will stand firm and prosecute wildlife refuge violations," he added.

He said the Coast Guard has used the island under agreements with both the federal and state governments.

He said the agreement with the Fish and Wildlife Service says the Coast Guard can remove anything from the island that it built, but nothing can be left without approval of the service.

LARGE FUEL TANKS are among things the service doesn't want. However, the state wants them to serve fishing boats.

H.A. Hansen, Honolulu district director of the Fish and Wildlife Service, said, "We plan on developing a research station on Tern, open to all researchers on the natural environment."

He said it's planned to rehabilitate some of the facilities and get rid of the diesel generators because the station will use solar heat and a wind-generating plant.

"The research facility will be open for fisheries research, but not for fishermen," Hansen said.

"We hope to turn it as much as possible back to wildlife," Giezentanner said.

He said the air strip on Tern will be maintained for small airplanes for emergencies but will not be available for big aircraft because of the large number of birds in the area.

"We will not trade off the wildlife resources for commercial activities," Giezentanner said, adding, "I hope they (state officials) start talking conservation as well as commercial activity."

Kenji Ego, state Division of Fish and Game director, said the state would like to use Tern Island as a refueling base for fishing vessels as fishing expands in the Leeward Islands.

"THEY ARE REMOVING things that could be used by commercial fishermen," he said.

He's also unhappy with the overall refuge operation.

"No one can visit except scientists, and few of them," he said.

Ego would like to see the refuge area opened up for conducted tours — a sacrilgious thought to refuge officials.

He said the Leeward Islands constitute "a natural museum in the wild. In a lonely way, it's a beautiful area . . . and our people should be able to visit it.

"It can be done so the intrinsic values are not degraded," he said. "It would create awareness for preserving these things . . . a wider group of people interested in protecting such areas.

"We would get aesthetic enjoyment and crank in economics with tour groups conducted on a scientific basis.

"In this day and age, many people are ready for this type of excursion," Ego said. "It would be under strictly controlled conditions.

"We could crank in recreational aspects, such as sport fishing, again controlling it to maintain quality.

"Certainly, we must consider the resource, the natural areas," Ego said. "But we have people to consider also.

"What is resource management but managing both the resource and people?"

Fisherman seeks test case at French Frigate Shoals

By SANFORD ZALBURG
Advertiser Staff Writer

A Honolulu commercial fisherman has threatened to take his boat into "forbidden waters" — inside French Frigate Shoals — and risk arrest and confiscation of his boat to make a test case.

The U.S. Fish and Wildlife Service years ago put French Frigate Shoals, 540 miles northwest of Honolulu, out of bounds to protect the Hawaiian monk seal, the green sea turtle and seabirds.

Ohai

Leo Ohai, owner and skipper of the $500,000 modern fishing vessel Libra, said angrily: "We've been waiting almost two years. They tell me: 'We don't want you to rock the boat.' Well, somebody is going to be rocking it. We'll get arrested and bring this to a head."

Ohai wants to purse-seine for moi (threadfish) and ulua (crevalle or jack) inside French Frigate Shoals. "This thing is really bugging us," he said. "We know there are a hell of a lot of fish down there."

J. Brent Giezentanner, refuge manager, Hawaiian Islands National Wildlife Refuge, said the wildlife service permits fishermen to go inside the fringing reefs of French Frigate Shoals only for an emergency. Otherwise, they have to stay out. "Ohai knows the place very well," he said. "He hasn't been able to go in since 1956."

Giezentanner said a five-year study is under way to determine if the wildlife service can open the shoals to fishermen. The study is in its second year.

The state and the federal government are disputing who has jurisdiction over French Frigate Shoals, the Pearl, Hermes and Maro reefs, Nihoa, Necker, Lisianski and Laysan islands and Gardiner pinnacle, all in the Leeward chain of the Hawaiian archipelago.

"We maintain that we own the reefs and the fastlands (the emerging lands)," said Giezentanner. The dispute may wind up in court.

Giezentanner pointed out how delicate is the balance of nature in those islands. He said rabbits introduced on Laysan ate every scrap of vegetation and caused the elimination of three species of seabirds. Men treading on land can disturb birds' nests. "We are concerned about things like that," he said.

Ohai said he put $40,000 worth of equipment and refrigeration aboard the Libra just to fish in places such as French Frigate Shoals.

Hawaii Truck Rodeo

Hawaii's finest truck drivers will compete in this year's statewide Truck Rodeo, an annual event, which will be held at the old airport road on Lagoon Drive beginning at 8 a.m. tomorrow and Sunday.

Winners will compete in a national rodeo in St. Louis, Mo., this fall.

Big Isle ahi catch grows; so does 'burn' problem

from the sea
mike markrich

NAALEHU, Hawaii — The good news on the Big Island is that the fish are biting — most recently at Milolii, 20 miles from South Point — and local fishermen are hauling in more yellowfin tuna than they have in years.

The bad news is that 70 percent to 80 percent of the tuna is so badly discolored or "burned" that they cannot be sold on the Mainland and Japanese sashimi markets.

Longtime Naalehu fish buyer Roy Koi said that after a relatively slow summer — the traditional ahi catching season — the catch increased from 3,000 pounds a day six months ago to 20,000 pounds per day last month to 30,000 per day two weeks ago. This means that it is common now for individual boats to bring in from six to 10 ahi of 150 pounds each time they go out.

The South Point ahi "run" has attracted boats from all over the Big Island. For many, it represents the first real taste of prosperity in years.

As veteran South Point fisherman Eddy Kuahiwinui put it from the cab of his brand-new truck, "Things really pick up when the fish are biting."

But in spite of the great catch there has been disappointment.

"No matter what my fishermen do, everything is coming up burned," said Koi, shaking his head. "My fishermen have tried everything. They gut the fish. They bleed them. They ice them. They carry them by the tails. They do every thing you're supposed to do, but the fish still burns."

Fisherman Pancho Freitas agreed. "It's just bad fish right now" he said philosophically. "Sometimes you can catch fish, and not ice them or anything and they're OK . . . and sometimes, no matter what you do, they just burn."

But others disagree that the problem lies completely with the fish.

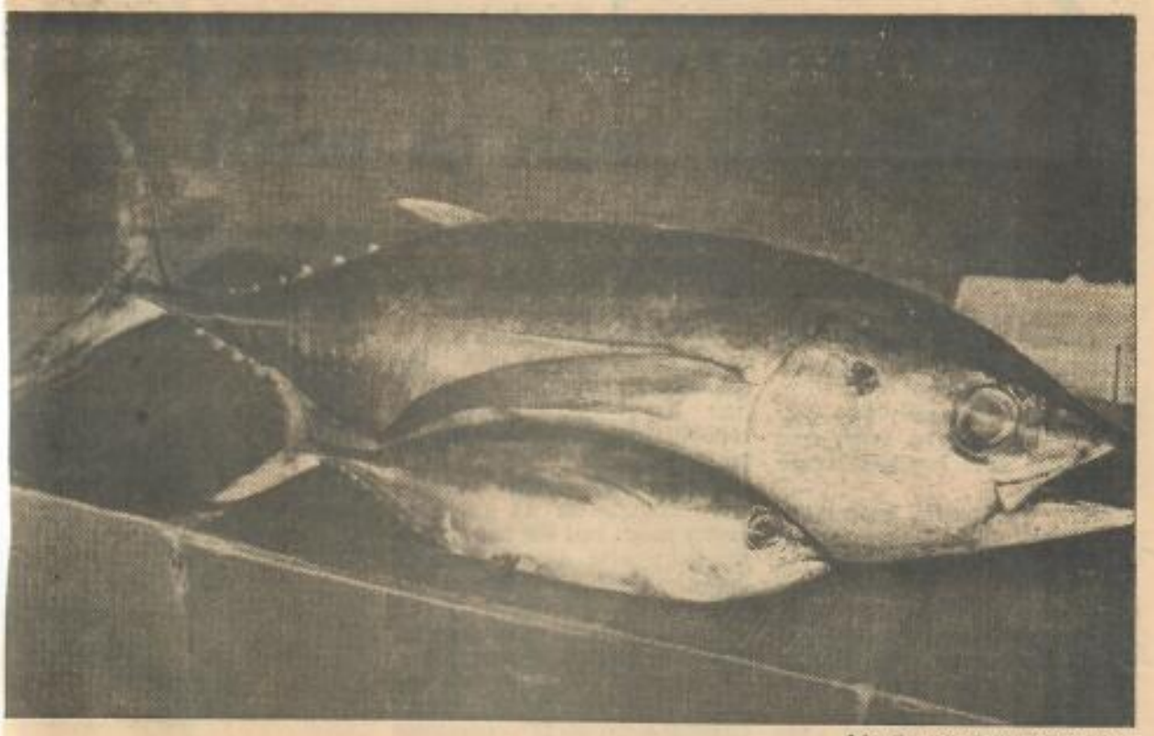
Big Island fishermen such as Freitas and Kuahiwinui use hand lines to catch big ahi in a brief but intense fight.

In Japan, as on Oahu, most of the fishing for ahi is done from longline boats — so called because these boats set long, baited lines deep below the surface. These lines cause the fish to be hooked and caught over a period of many hours. As a result, the fish are so tired they do not put up much of a struggle when they are boarded.

Although Japanese fish scientists have not discovered a way to eliminate burn completely, they have learned that it is related to stress and have developed several means to control it. Ahi caught alive on Japanese fishing boats are killed instantly with a special device called "the taniguchi tool." This long, thin, metal rod is driven through the brain of the fish and down its spine so that it dies instantly. The ahi is then bled, gutted and placed in an ice-and-brine solution to cool rapidly.

Kuahiwinui said he has heard of the device but never tried it. He and most other Big Island fishermen use firearms to kill fish. The firearms, ranging from .22-caliber pistols to 30.06 rifles, are used to kill and board the fish quickly so that they can catch as many fish as possible. (A recent University of Hawaii study shows that fish that are shot have a greater tendency to become burned.)

Kuahiwinui acknowledged that it would be better to catch three or four fish of guaranteed high quality that bring $4 per pound than a boatload of mostly burned fish bringing only 50 cents a pound. But ... has



Advertiser photo by David Yamada

A 2-pound ahi rests on auction block next to an 18-pounder.

learned to accept the fact that many of his fish will be burned so he must catch a lot to make up for the low prices.

"Its a damn shame to kill those beautiful fish like that if you're not going to take care of them," said Hilo fisherman Dave Thompson. "It's a waste. Instead of going for quality, those guys are going for a boatload and it doesn't make any sense."

Thompson said that he no longer uses his .22 pistol to kill ahi because he found it resulted in too much spoilage (and too many holes in the deck of his old boat). He said that last year, he started using an ice pick and the taniguchi tool to kill ahi and is doing much better. Thompson said that of the last 19 ahi he caught, only three were burned.

(However, Bob Nakamura, a University of Hawaii expert on the burned tuna problem, said spiking alone does not guarantee quality. Nakamura said Thompson's fish are good because he is careful in the way he handles them.)

Part of the blame for the burn problem, Thompson said, belongs to the fish dealers. "Those dealers should be demanding better-quality fish . . . They should be interested in getting a better reputation for the industry."

But Zenzo Kanai, secretary-treasurer of Suisan Co. Ltd., the Big Island's largest fish dealer, said his company isn't happy about things either. Kanai said he and other fish dealers are having a hard time selling the "burned" fish on the Mainland and in Japan, so the relatively small Big Island ahi market is inundated with more fish than it can absorb.

Zoo controversy su

Director seen as unfit by s

By Donna Reyes
Advertiser Government Bureau

A central character in the controversy surrounding the Honolulu Zoo is Director Jerome Marr, who has worked at the facility for nearly two decades. Mayors have come and gone, but Marr has been there throughout.

Marr, 45, was the zoo's curator for 12 years under former director Jack Throp. He ran the zoo on an acting basis after Throp left in 1979, then received his permanent appointment to zoo director in 1980, the last year of the previous administration of Mayor Frank Fasi.

A former city official says mismanagement has plagued the Honolulu Zoo for years and continues to be the main cause of the facility's troubles. Sam Carl, deputy parks director under former Mayor Eileen Anderson, contends Marr is unfit to serve as zoo director.

Others say Marr is hard-working and can successfully complete the city's new program for improving zoo conditions.

And in a status report to Fasi last week, city Budget Director Hiram Kamaka had some high praise for the veteran zoo official. Over the past three months, Kamaka said, he has been working closely with Marr in an effort to get the zoo and its operations back on track.

consultant to the current Fasi administration.

In a recent interview, Throp too had high praise for Marr.

"Jerry was a fantastic guy to work with," Throp said. "We couldn't run the zoo without him. Jerry was an absolutely reliable individual. He was a perfect second."

Breese said Throp — who was director for 14 years — pretty much ran the zoo single-handedly and didn't delegate many duties to Marr. "He (Throp) should have given Jerry more rein, more leeway, more assurance," Breese said.

"Jack didn't let Jerry do the right stuff. He (Marr) wasn't doing the day-to-day operations as well as (the current curator) Cor Janson is doing. Jerry did more paper work, more administrative work. Cor is out on the front line — that's what the job is supposed to be," Breese said.

Throp, however, said that "anytime I was not there, Jerry was in charge. He had full opportunity for administrative responsibility. He ran the zoo on my days off — Sundays and Mondays," Throp said.

Throp said there are two parts to a zoo directorship: handling day-to-day operations and long-range planning.

"It would be impossible to measure how another person would respond to long-range planning and management. My

70 percent of the facts, you move," Breese said. He said he has repeatedly warned Marr about his "foot-dragging" and has advised him to "pick up his pace at the office."

Breese said Marr was instrumental in helping to design a new master plan for the zoo during Eileen Anderson's administration from 1981-84, but because so much time was spent studying the ambitious plan, "not one spadeful of dirt has been turned over on it."

Said Breese: "I think Jerry

The Honolulu Advertiser Thursday, February 7, 1985 A-5

3 from stricken boat near Shoals are identified

The three crew members of the stricken fishing boat Carolyn Kay were identified yesterday as Kim Lindell, Vincent Gentilly and Tim McMahan.

The three were evacuated to an island by U.S. Fish and Wildlife workers from a nearby research station after the 38-foot boat hit a reef near French Frigate Shoals and took on water, the Coast Guard said.

The three were not hurt, the Coast Guard said.

MARCH 13, 1980
HSB

Laysan-Born Islander Recalls

By Harry Whitten
Star-Bulletin Writer

Eric Laysan Schlemmer's middle name calls attention to the tiny island on which he was born March 22, 1903.

Laysan is a coral island, two square miles in size and 40 feet at its highest point, located 790 miles northwest of Honolulu.

Schlemmer's brother Otto and sister Ottlie Unger, of Hilo, were also born on Laysan. They were the children of Maximilian Schlemmer, manager there for the North Pacific Phosphate and Fertilizer Co., and his wife.

The company mined guano, a fertilizer rich in phosphates and ammonium compounds built up over the years from the excrement of millions of seabirds.

Schlemmer recently had occasion to tell three young biologists with the U.S. Fish and Wildlife Service how they could dig for fresh water on the island when they go there this month on a five-month research trip.

SCHLEMMER MOST recently returned to Laysan in 1971 and dug a small well on a trip with Eugene Kridler, then refuge manager with the Fish and Wildlife Service.

The Schlemmer family lived on Laysan for 10 years, the only family there. There were the two parents, seven children, 23 Japanese laborers to mine guano, and a Norwegian carpenter.

There was a modest frame house, a few small outbuildings, a shed to store the guano, and railroad tracks for carts on which guano was loaded and wheeled to the shoreline.

The ship arrived twice a year, bringing in rice, beans and other supplies and departing with the guano for Honolulu. The ship had to anchor offshore and guano was taken out to it in lighters. Much hand labor was involved.

Between ship arrivals, the people on Laysan were isolated. Mrs. Schlemmer gave birth to five children on the island, without medical help.

"BUT WE WEREN'T lonesome," Schlemmer says today. "We were used to the environment." His oldest sister Mary taught the younger children.

His father, usually called "Capt. Max" and sometimes referred to as the "king of Laysan Island," liked the solitude.

Max Schlemmer had been born in Alsace, Germany, in 1856 and died in Honolulu in 1935. He had been a captain of police and a marshal under the Hawaiian monarchy.

In 1902 and 1903 he asked the ship to bring in rabbits to supplement the limited food supply of the island residents. This move resulted in strong criticism from biologists because in 20 years' time the rabbits multiplied so fast that they devastated the island vegetation.

The Schlemmers left Laysan in 1907 after the supply of guano had been pretty well mined out.

TODAY SCHLEMMER says the mistake was in leaving too hastily. "We kept the rabbits under control, but they went wild and multiplied after the island was turned into a bird refuge," he says.

If someone had remained on Laysan, the rabbits would have been kept under control, he says.

After guano mining ceased, Japanese feather hunters arrived and killed hundreds of thousands of seabirds in the Northwestern Hawaiian Islands, including an estimated 300,000 on Laysan during a six-month period in 1909.

To stop the slaughter, President Theodore Roosevelt in 1909 put the islands in the Hawaiian Islands Bird Reservation, later renamed the Hawaiian Islands National Wildlife Refuge.

In June 1915 Max Schlemmer sailed for Laysan aboard the one-masted sloop Helene, accompanied by his son Eric, then 12 years old, and a young Norwegian, Harold Brandt. Max wanted to be named refuge warden and planned cleanup work around the abandoned buildings.

They reached Laysan after a rough trip. On Sept. 28 their plans were changed when a lifeboat arrived with the captain and crew of the schooner O.M. Kellogg, which had been shipwrecked the night of Sept. 25 on Maro Reef, a rock outcropping east of Laysan.

BIRTHPLACE—This is the house on Laysan Island where Eric Laysan Schlemmer was born in 1903.

Its 'Mining' Days

SUPPLIES WERE insufficient for everybody, so Capt. Max offered the Helene to the Kellogg's crew, so they could sail to Midway. The Schlemmer party expected to be picked up in November by the Coast Guard cutter Thetis.

But the Thetis didn't arrive. The party was running short of food as they scanned the ocean, day after day, looking for rescue, which came Dec. 2 when the Navy collier Nereus came and took them off.

A young electrician on the Nereus was Harry P. Field, who later became vice president of Hawaiian Electric Co., the same company for which Eric Schlemmer worked 43 years before retiring as a superintendent of maintenance in 1967.

Schlemmer returned again to Laysan in 1923 when he served six months as an assistant to the ornithologist Alexander Wetmore on the Tanager expedition for the Smithsonian Institution.

The Tanager expedition, among other things, exterminated the last of the rabbits; the U.S. Biological Survey had sent out previous parties to kill rabbits.

BUT BEFORE their extermination, the rabbits had eaten up so much vegetation that three native birds, the Laysan rail, Laysan millerbird and Laysan apapane became extinct.

Only three Laysan honeycreepers remained and they apparently disappeared in a big windstorm during the Tanager expedition.

Of the native birds, only the Laysan duck (or teal) and the Laysar finch survived. The Laysan duck almost became extinct but its population has increased to about 300, while there are an estimated 8,000 Laysan finch now.

The vegetation on Laysan made a good comeback after the rabbits were exterminated although three plant species became extinct.

And there is a breeding population of more than a million seabirds such as sooty terns, Laysan and black-footed albatrosses, and Bonin Island petrels.

Eric Laysan Schlemmer

Report

Honolulu Advertiser

★★ Monday, March 23, 1981 A-3

Fish: *Co-op will bypass auction*

Island catch for sale: new Hawaii Fishermen's Co-op hopes to provide more fish cheaper.

Pacific albacore catchers kept afloat by trade hui

By Barbara Hastings
Advertiser Science Writer

And then there are the people who work out of Honolulu and range the Pacific between Midway and the Aleutian Islands fishing for albacore.

They've organized, too.

These folks spend weeks and weeks, generally two months at a time, at sea pursuing the white tuna called albacore. When they come into port, their frozen catch doesn't go to auction, it goes to the canneries.

The Western Fishboat Owners Association, a West Coast-based trade group, has made sure over the last dozen or so years that these albacore catchers get enough for their fish to make it worth their while.

About 14 albacore boat owners have just become the Hawaii chapter of the association. The boats in the Hawaii group are worth an average of about $400,000, which isn't a very big boat in comparison to Japanese and other foreign fishing fleets.

But if the price is right at the canneries, you can make a decent living at albacore fishing, says Dave Davies, who is the ranking local member of the association. (Actually, Dave Davies' real name is Roger Davies. "Roger. That was the name my mother gave me. She didn't know I'd live 40 years using a radio," he quipped.)

Davies says the albacore fishing fleet of Hawaii "is meaningful to this community, that we have this kind of investment and we are residents . . . not just a bunch of haoles who came out."

He names the various owners of the boats that are registered with the association. This one has lived in Hawaii all his life, that one too, this one's lived here most his life, and so on. "But we are adding from the Mainland," Davies said.

What the association has done "is make it possible for small producers to negotiate with super processors," Davies says. "Some gruesome things happened in the early days," he adds, including no protection from the foreign market. Now, the association coordinates the price with the world market for the fish when it negotiates with West Coast and Hawaii canneries.

Just a few years ago, the fishing grounds from Midway to the Aleutians were being fished by only three or four boats and those boats were getting partial support for doing research. Last year, there were 37 boats fishing out there (the 14 from Hawaii and the rest from the West Coast) and 60 or 70 are expected this year, Davies said.

The albacore season is a short one for the fishing fleet, and if your boat will only hold 30 tons like Davies' rig, then it means a trip back to Honolulu to drop off the frozen catch, then a quick return to the fishing grounds. That takes a total of about 25 days and a lot of fuel, Davies said.

In 1979, the Hawaiian Tuna Packers, which is where most of these fishing boat owners like to bring their catch, sent a mother ship out to the area to supply the fleet with fuel and to take the caught fish.

That was a good season, Davies said. The boats took an average of 78 tons each that year. Last season, though, the cannery ddn't send a mother ship, so the average catch was somewhere between 50 and 63 tons per boat, he added.

Most of these boats have two- or three-person crews. Some of them are husband and wife teams. During the May-to-September albacore season, these folks spend most of their time on the high seas. The albacore fishing is hook and line, not net, and the average catch for these boats a day is probably a ton or less, Davies said. "Three tons a day, that would be an exceptionally good catch."

Last year, a ton of fish netted $1,610. Davies credits the association with obtaining a reasonable price and with earning these fishing teams "respect from banking and other groups. We have respect as an industry now, not just some left field orphans."

bob krauss
Advertiser columnist

A group of full-time and weekend anglers are forming a fishing cooperative which they hope will stimulate the industry and provide fish at lower prices to the public.

The group plans to market its own catches both to the wholesalers and to the public, bypassing the fish auction, starting April 2.

Leo Ohai, long-time akule fisherman, is temporary president of the new organization, Hawaii Fishermen's Co-op Inc. He said about 70 fishermen attended the last organizational meeting. That includes about 90 percent of those who supply the market with reef fish, he said.

Another organizational meeting was held last night, at which about 80 fishermen showed up to listen to speakers explain how the co-op will work.

Fisherman Louis "Buzzy" Agard said the co-op should be able to pay better prices for catches than the fish auction because no middlemen are involved. He added that the co-op will also be able to sell fish at its own outlets at reduced prices to the public for the same reason.

Cyrus Tamashiro, vice president of Tamashiro's Fish Market, said he is sympathetic with the desire of those who fish for a living to get more for their fish.

"We would buy fish from the co-op if the price is competitive," he said. "I don't think the sale of fish by the co-op at their outlet will affect our regular customers."

However, he said he would expect the price of fish at the co-op to go up during scarcity just as it does at the auction. And the price will go down during the summer when the supply of fish is plentiful.

Frank Goto, spokesman for the United Fishing Agency, operators of the fish auction where catches normally are sold, said he is neither for nor against a fishing co-op. "My question is, how are they going to put money in their pockets by selling fish at lower prices?"

"There's a lot of overhead in marketing fish," he said. "If this is the case for the way fish are marketed now, how are they going to relieve the problem by having more stores?"

One dealer in fish was not optimistic that the co-op will succeed.

"It sounds like they have big plans," he said. "They're talking about vertical integration; producing, wholesaling and marketing. That takes a lot of money. They'll have to get some big backing."

He said other proposals for fishing co-ops in the past never got off the ground.

Organizers of the co-op, however, pointed out that there has been a fishing co-op on Kauai for the past year and that the tuna boat owners have been organized for much longer.

Ohai said one reason for the success of the Tuna Boat Owners Association is that whatever fish they cannot sell at the auction is taken by the cannery at a price that pays fishermen's expenses.

Other fishermen do not have this alternative.

"Fishermen are now at the mercy of the buyers," said Larry Smith, member of the board of the co-op. "They have to take what the buyers offer. But the price of gasoline and other expenses keeps going up.

"They's why many fishermen have gone under. They have no alternative."

Ohai said he created his own alternative four years ago by opening his own fish stall. "I quit the auction over a nickel," he said. "We asked for 80 cents a pound. They wanted to give us 70 cents.

"I was willing to come down to 75 but they wouldn't come up. So I quit.

"Now I'm going great guns selling my own fish at $1 (akule sells for something under $2 per pound in the fish markets.) I make more money than I did at the auction and I sell as many fish as I can catch."

Ohai said he keeps a fish stall at the Cultural Plaza downtown. When his two boats come in with catches, he advertises on Japanese and Filipino radio stations. Customers flock to his fish stall to buy the inexpensive akule.

Smith said the co-op plans to take over Ohai's stall at the Cultural Plaza and open another on Kekaulike Street. Eventually, the co-op plans to have outlets all over Oahu and on all islands selling fish of all kinds brought in by co-op members.

Hawaii Fishermen Form Co-op

By Helen Altonn
Star-Bulletin Writer

Hawaii fishermen, who are being squeezed out of business by rising costs of operations and low prices for their fish, have decided to do something about it.

They have formed a cooperative — Hawaii Fishermen's Co-op Inc. — and will sell their catches in an open fish market in the Chinese Cultural Plaza starting April 2.

Philip Mirafuentes, a board member and coordinator of the new co-op, said the members will net a lot more money for their fishing efforts through a profit-sharing arrangement.

"We will sell directly to the public and bypass the middle men, which also will mean lower prices for consumers," he said in an interview.

However, he said, "We don't want to raise a red flag and go against retailers and wholesalers .... We have talked to them already and they indicated they would buy our fish to supply supermarkets. But we don't know what will happen when the time comes."

Mirafuentes has a fishing supply business and also is a fishermen and a firemen. "I have listened to the fishermen's problems, and we're all in the same boat," he said.

HE SAID THE fishermen are "at the mercy of the retailers and wholesalers .... They have to buckle and agree to terms, and they are are not getting a fair share of what the fish is selling for."

For example, he said, fishermen are getting 30 cents a pound for perch which sells over the counter to the public at $1.29 a pound.

to Sell Direct to the Public

He said many fishermen can't make ends meet because of high costs for fuel, ice, equipment and vessel loans. "A lot of them are planning to give it up because their costs are surpassing their returns."

Mirafuentes said the co-op has been formed with nine officers and directors, headed by Leo A. Ohai, a commercial fisherman with the Oceanic Libra Corp.

Fishermen across the state are invited to join the co-op and to attend the next meeting, scheduled at 5:30 p.m. March 22 in the Carpenters Union Hall, 1311 Houghtailing St.

The co-op will take over the lease on a fish market now operated by Ohai in the cultural plaza to sell his fish, which totaled more than 500,000 pounds last year, Mirafuentes said.

He said fishermen will pay a one-time membership fee of $300, which will entitle them to a vote and an equal share of the profits.

HE SAID STEERING committee meetings have been held for about four or five months since more than 75 interested fishermen attended a general meeting to discuss the idea of a cooperative.

The fishermen asked the coordinating group to do more research on the plan. They hired attorney Michael Tongg to pursue the matter.

Officers, in addition to Ohai, include Larry Sasaki, vice president; Danny Pires, secretary, and Robin Lee, treasurer.

Mirafuentes said the co-op will tack 25 cents per pound onto the price of fish sold in its market to cover expenses and the rest of the proceeds will be divided among the members.

Applicants are being interviewed to manage the market, he said.

University of Hawaii
Waikiki Aquarium
Honolulu, Hawaii 96822

1984

WAIKIKI AQUARIUM NATURAL HISTORY LECTURE SERIES

Natural processes operating in the Pacific basin make it a tremendous laboratory for the study of the earth's history. Geological forces are at work, slowly creating and breaking down land masses, while living organisms reveal exciting information about life on earth. Here in Hawaii, we have excellent opportunities to better understand both the islands we inhabit and the earth itself. The Waikiki Aquarium's 1984 Natural History Lecture Series looks at examples depicting Hawaii's place in the dynamic Pacific.

JANUARY 25

MEGAMOUTH AND OTHER MARINE DISCOVERIES

Dr. Leighton Taylor
Director, Waikiki Aquarium

The ocean environment is so vast and complex that even after centuries of exploration, new life forms are still being revealed. Dr. Taylor discusses some recent discoveries of exciting marine life in Hawaiian waters and explains the significance of these finds.

FEBRUARY 22

HAWAII'S LIVING TREASURES:
AN ENDANGERED RESOURCE

Dr. Sheila Conant
General Science Department, U. H.

The Hawaiian Islands are home for spectacular examples of plant and animal evolution and adaptation. Dr. Conant describes some of these and explains how, with so many organisms found nowhere else in the world, our islands have one of the world's longest lists of extinct and endangered wildlife.

MARCH 21

ORIGIN OF THE HAWAIIAN ISLANDS -
HAWAII'S PLACE IN THE PACIFIC

Dr. Frank Peterson
Dept. of Geology & Geophysics, U. H.

The Pacific is a showcase of dynamic earth processes. Dr. Peterson summarizes the geological forces and features important in the Pacific Ocean basin and explains Hawaii's place in this picture. Highlighted are the roles of plate movement and hot spots in the origin of the Hawaiian islands.

APRIL 18

THE FLOWERING OF HAWAII...
AND ITS DEFLOWERING

Dr. Charles Lamoureux
Department of Botany, U. H.

Among the first colonists to the newly-formed Hawaiian Islands were plants. In this presentation on native Hawaiian plants, Dr. Lamoureux explains where they came from, how they got here, how they evolved into distinctly Hawaiian species, and how they have declined in recent times.

MAY 23

SEABIRDS OF THE HAWAIIAN ARCHIPELAGO

Stewart I. Fefer
U.S. Fish and Wildlife Service

The Hawaiian Islands support some of the most important seabird colonies in the world. Stewart Fefer, a migratory bird biologist, describes the distribution and natural history of some of these seabirds, and potential effects of human activity on their colonies.

JUNE 20

ECOLOGY OF THE NORTHWESTERN HAWAIIAN ISLANDS

Dr. Richard Grigg
Hawaii Inst. of Marine Biology, U. H.

The isolated rocky islands and coral shoals of the Northwestern Hawaiian Islands are scattered over more than 1000 miles of the Pacific. Dr. Grigg's presentation highlights the rich diversity of life found from shoreline to open water, and includes a new film describing a unique scientific study of interactions that link island and ocean life together.

JULY 18

CARNIVOROUS CATERPILLARS AND THE SECRETS OF SIX-LEGGED WILDLIFE

Steve Montgomery
Department of Entomology, U. H.

Hawaii's bogs, marshes, and forests teem with wildlife that often escape our notice. Entomologist and naturalist, Steve Montgomery, describes the variety, lifestyles, and adaptations of "killer caterpillars" and other amazing insects.

AUGUST 22

ORIGINS AND BIOLOGY OF HAWAIIAN NATIVE STREAMLIFE

John Ford, U.S. Fish & Wildlife Ser.
Dr. Robert Kinzie, Zoology Dept. U. H.

While Hawaii's freshwater streams are mere trickles compared to the vast ocean around our islands, they are the homes for some of Hawaii's most fascinating and vulnerable creatures. John Ford and Dr. Kinzie describe the habits, habitats, and biogeography of Hawaiian streamlife, emphasizing their recent research on native goby fish (o'opu).

SEPTEMBER 19

OCEAN, WEATHER, AND CLIMATE IN THE PACIFIC

Dr. E. Dixon Stroup
Department of Oceanography, U. H.

The world's largest ocean, the Pacific, is a weathermaker. Dr. Stroup explains the ocean's influence on our local weather and its role in persistent, Pacific-wide patterns like the El Nino of 1982-83 whose effects on weather and climate were felt from Australia to Alaska.

OCTOBER 24

LOIHI SEAMOUNT, THE NEXT HAWAIIAN ISLAND?

John Wiltshire
Dept. of Geology & Geophysics, U. H.

Located off Hawaii's southeastern coast, only 30 miles from Kilauea, Loihi seamount has already risen 10,000 feet off the seafloor. John Wiltshire describes this active volcano, now only 3000 feet below the ocean surface, and some of the unique mineral deposits it may contain.

Wednesday evenings, 7:30pm
Waikiki Aquarium foyer
$1.50 donation appreciated.

2777 Kalakaua Ave., Honolulu, HI, 96815 Phone:923-4725

Star-Bulletin

Today

Features
Entertainment

Thursday, March 12, 1981 Honolulu

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Ohai works on a net with his boat, the 'Libre,' in the background.—Star-Bulletin photo by John Titchen.

A Treasure of the Sea

By Lois Taylor, Star-Bulletin Writer

A group of fishermen met Tuesday night and for the first time made serious plans to form a cooperative, an organization to market for themselves the fish they have caught. Now, almost all of the fishing-boat owners put their catches on the daily auction block of the United Fishing Agency.

Their split from the UFA would come almost four years after the defection of the state's certainly most colorful and possibly most successful deep-sea fisherman, Leo Ohai. The other fishermen are forming the co-op with Ohai's blessing and advice.

Ohai's skill in the ancient art caused him to be named a "living treasure" last month by Honpa Hongwanji Mission, whose membership annually honors four or five local residents for their unique abilities. Others this year included authors Leon Edel and O.A. Bushnell, Hawaiiana experts Julia Rice Wichman and William Meinecke, and musician Sol Bright.

Ohai's adventures include a 20½-hour swim in cold water and a 6½-hour hike along the rugged coastline of Molokai after he ditched his airplane in the Molokai Channel in January, 1967. The plane is an important part of Ohai's success as a fisherman since it is from high altitudes that schools of fish are spotted.

Three years earlier he suffered a case of the bends while diving off the Kona Coast and flew himself to Honolulu in that same plane for treatment. When he was unable to manage the controls, he was assisted by his passenger who had never flown a plane before.

In 1965, Bob Whittinghill Jr., 18, made an emergency landing on a deserted Niihau beach, a place well off the airlanes and where strangers are not particularly welcome. When Ohai heard that Whittinghill was missing, he headed straight for Niihau, shined a 69-cent flashlight on Whittinghill's aircraft from his own plane, and learned by radio that the downed pilot had blown a tire. He picked up a replacement and dropped it the same night so that Whittinghill could fly out.

When Ohai was flown back to Honolulu from his 27-hour ordeal on Molokai in 1967, it was Whittinghill who made the trip to pick him up.

particularly if you're close to the mountains and the sound bounces.

"We drop the net from the skiff—the pilot tells us by radio just where. When the school is surrounded, we send the divers down to set up the nets so the fish can't get out under the lead line," Ohai explained.

"Once the fish are in the net, they'll huddle together in the center and stay away from the edges. Then we make the net smaller and smaller, and a bag of finer net is set inside the bigger net. The divers secure the bottom edges, the fish are trapped inside the bag, and we haul it in.

"We brought back what we thought was enough for the market, and let the rest go," said Ohai. "We sold it the first day for $1 a pound, and what was left was gone at 85 cents a pound by noon the next day. Eventually we hope to bring in 60 to 70 thousand pounds when we have the capacity to flash-freeze part of the catch.

'WHEN we first started, there were maybe 20 akule boats on the waterfront. Eventually they all gave up because it just wasn't profitable. At the fish auction, the market people buy by the 100-pound basket. When you got $7, that was good.

"For 15, 16 years, I sold fish to anyone who wanted it. Then I decided to try the auction block. The owners were friends of mine and they kept asking me to try. So in 1965 I said, 'OK, we try.' We gave our fish to the auction block for more than 15 years, but the prices were getting real bad.

"Finally, four years ago, we were getting set to go the Leeward Islands for lobster and bottom fishing. We were all loaded with the lobster traps aboard when two or three big boys, fish buyers, came to the boat and said, 'You better get us some akule. The prices are way high.'

"At that point, they were paying $2.50 a pound for gill-netted akule. Ours is worth more.

selling akule for 75 cents a pound. Like everything else, particularly with our fuel, the price has gone up. It's $1 a pound now, and that goes for anybody who wants to buy.

"The big markets are still buying from me. They bought 7,000 pounds from this last load, but they pay the same $1 a pound that the public pays. A lot of people prefer to pay more at the market where the fish will be cleaned and wrapped."

Ohai sells the whole fish, usually five or six of them, in a plastic bag. Buyers pull numbers from a rolled tape for service, as they do in bakeries, and last Thursday when the first of the catch went on sale, customers were lined up outside the market.

"Quite a few fishermen tried going on their own after I did, opening their own markets instead of selling on the auction block. They all went under. They wanted to know how I broke away from the auction and went on my own. I gave them my viewpoint," he said.

"The reason we survived and they didn't is as plain as the nose on your face. If you don't control the supply, you can't control the market. There might be 100 fishermen catching the same fish—kumu, weke, mempachi. They're all selling the same thing, but they aren't catching in bulk so anybody can undersell anybody else.

"He's asking $1, so you go 75 cents. In our case, it's different. When we catch akule, we control the price. The guy who catches 1,000 pounds—he's got to take what the markets offer at the auction. If the market people buy it for $1 a pound, they have to mark it up for their overhead. But I've got 40,000 pounds and I'm selling akule retail for $1 a pound. So the market tells this guy, I can't give you a buck when Ohai is selling to the public for a buck.

"That's why they need a co-op.

OHAI has landed on Waialae Golf Course when his plane had engine trouble, and suffered when one of his three sons drowned while trapped in a tangled fishnet. Ohai's boat, the Shirley I, caught fire and sank two months later off Barbers Point at almost the exact spot where Paul Leo Ohai had died.

Since 1973, Ohai has turned the piloting of his small plane over to his son Nephi and directed his own energy toward catching and marketing fish. His last catch of akule, sold at his market at the Cultural Center last Thursday and Friday, came in at more than 40,000 pounds. And that was after he freed another 60,000 pounds from his nets because there isn't a market for that volume.

The Libre, Ohai's larger boat, is 60 feet long and can carry 58 tons of fish. The fish is caught in purse-seiner nets, considered to provide a better-tasting fish than gill nets. Gill nets injure the fish before it is ready for market.

"We carry a 26-foot skiff on the boat. That's where the nets are. When we spot a school, we use four real husky guys to oar so there's no noise. The school will disperse if they hear a motor. They can hear a plane at 1,500 feet.

"I sent Nephi out in the plane to spot fish—before we move, the plane goes out. He found a small school near Molokai, so we unloaded all the lobster stuff, which took the better part of the day, and put the nets and diving gear back aboard. We went out and caught 17,000 pounds of big akule.

"My oldest boy, Levon, he's the negotiator. He went to the auction block and said, 'We're asking 85 cents.' It wasn't like we were asking $1, $1.25. We wait, we wait. The buyers won't pay 85 cents, they offer 70 cents. We come down to 75 cents, but they say 'No, we won't pay more than 70 cents.'

"I figured, hey, that's dirty pool. They sent us out there saying that the prices for akule were high and now they won't pay us 75 cents a pound.

"I told the auctioneer, 'Forget about the block. We aren't selling one more fish there. We're pulling out.'

"We set up trucks and hauled the fish out of the auction and started selling at pier 15. There was a hassle from the health department—you can't sell off the dock or off the boat to the public, only to the market people. So we opened our own market.

"WE were the first tenants in the Cultural Plaza, back in 1977, and we started

"I had nothing to do with starting it—that was Philip Mirafuentes, Larry Sasaki, Bobby Villanueva and four or five others. They called me for my opinion. I said, 'Look, I'm a loner and I'd hate like hell to get involved,' but they said, 'All we want is your opinion. Will it work?'

"I think it's a good thing, I guess. I feel the fishermen would make more money and the public would get cheaper fish. They'll control the supply, like I said. I don't care what the market people say—they get together before the auction and figure out how much they'll pay. They might have good reasons for this, but they are always playing one fisherman against the other. One guy has to bring his price down because the market people can buy it cheaper somewhere else.

"I'd join the co-op, we're all fishermen. If I can get a buck, then the other guy can get a buck. If we want $1 a pound and if the markets won't pay, then we sell directly to the public."

"To keep prices down, you have to be talking about volume. If you're playing with just a few thousand pounds, the price has to go up. I figure, selling in volume is the way to go. The public gets the fish at a decent price and we're satisfied with the profit."

Ohai's new concern is the proposed change in the law that will allow lobsters of less than a pound to be caught in the Leeward Islands northwest of Niihau.

For three years we lobstered out there, and we caught a hell of a lot of (one-pound) lobsters. Then the supply was depleted. So now they want to go after the smaller ones. If this thing goes through, we're killing ourselves.

"You think the Fish and Game people would learn. They've fished out California, they've fished out Florida and Australia's Great Barrier Reef is fished out. Now they're talking about taking 1.5 million lobsters this year out of a fishing ground about 300 miles square. You can bet your lucky stars that if they do that this year, there won't be any 1.5 million lobsters for next year.

"Why do I get all worked up? I get worked up because I'm a fisherman. If the supply isn't there, we shouldn't be allowed to fish. Next they're going to fool around with the shrimp. If you rape the lobster area, you are going to wipe them out. I don't fish lobsters for a living, but maybe my kids will, and there won't be any left. What kind of deal is that?"

Maybe it's that kind of thinking, as well as knowing everything anybody ever knew about akule, that makes someone a living treasure.

Leo Ohai (Mrs. Ohai is in the foreground) sold 40,000 pounds of akule in two days at his fishmarket.— Star-Bulletin photo by Terry Luke.

'Blue Revolution' Seen for Aquaculture in Isles

Thursday, February 19, 1981 Honolulu Star-Bulletin A-9

By Helen Altonn
Star-Bulletin Writer

State Rep. Richard Matsuura believes Hawaii is about three years away from a blue revolution in aquaculture, similar to the green revolution which started with the discovery of hybrid seed in agriculture.

And he says the state must start preparing for the development by building "pillars."

"Once the foundation is built, the house can come very quickly. . . . It could be a fantastic mansion," he said in an interview Tuesday.

Although he's a freshman legislator, Matsuura, D-2nd Dist. (South Hilo), is in a position to help erect the "pillars" as head of the House Committee on Ocean and Marine Resources.

A horticulturist with a broad background in agriculture, he said: "I was part of the green revolution team and I have the same feeling now for aquaculture. Here is a gold mine. It just takes people with some imagination and guts . . ."

Matsuura clearly doesn't lack for imagination — he calls himself a "dreamer."

And he is taking a gutsy approach to his job with legislation ranging from an ocean-leasing law to acquisition of a Navy ship for the state's use in developing an albacore fishery near Midway.

HE IS DRAWING on his agricultural experiences to guide ocean and marine developments around mistakes made in agriculture.

For example, he said he "forgot all about marketing" in trying to promote soybean production in India while on a project there for the University of Illinois.

It would have been better to import soybeans from the United States, to process them and see if people would accept them, before going into production, he said.

that they could be coupled with employment needs in such areas as Waianae.

He also has introduced bills relating to marine food production, such as algae, which he said "opens up a tremendous potential in terms of food for underdeveloped countries."

"WE COULD perhaps be the world's leading center for aquacultural science, and it is exportable knowledge," he said.

Matsuura proposes a statewide processing logo for Hawaii's aquaculture products "to keep standards high and establish an instant reputation . . . Hopefully, we can develop the market so the production will fill the market, but there will be no overproduction," he said.

He said many of his bills are tourist-related because Hawaii's marine and aquaculture developments present a "showcase" for people. He believes they also could be a profitable sideline to the tourism industry.

For instance, he said, if acres of ocean ponds, such as at Kapoho, could be filled with mahimahi, "tourists would pay to harvest them."

But Masuura pointed out that manpower is going to be needed to have the kind of marine industry envisioned for Hawaii.

He proposes to start developing it in the schools with a bill authorizing the state Department of Education to contract for marine and aquatic education services.

"Unfortunately, my kids, who love the ocean, have had no opportunity to study marine resources in public schools," he said. "I, myself, didn't know anything about it until I became chairman of this committee."

Therefore, he said, he is concentrating on marketing, packaging and product promotion in his aquaculture bills.

"Take tilapia," he said. "You can grow them by the millions in Hawaii's ponds. They grow like mosquitoes."

But processing techniques are needed to convert them into fish cakes or fillets or other marketable products, he said. "This opens an entirely new ball game. If we have a breakthrough in processing, production is easy."

Matsuura said he "wanted a total picture" when he took the chairmanship of the House Ocean and Marine Resources Committee — "where we are going to move in the next five or 10 years, and how we can maximize our resources to achieve the goals."

HIS COLLEAGUES noted, with some amazement, that Matsuura read every report and study he could get his hands on concerning subjects of concern to his committee — fisheries, aquaculture, ocean resources and marine and aquatic education.

One of his major aquaculture bills cleared his committee Tuesday and was sent to the House Finance Committee with a $1.5 million appropriation for construction of the Tropical Aquaculture Center of Oahu at the University of Hawaii's Waialee Livestock Research Center.

Matsuura considers the research facility "very high priority," saying it is essential to solve problems as they arise in the aquaculture industry and develop sound marine-farming practices.

"Without it, we would be in real trouble," he said.

An inventory also is needed of the best places to develop aquaculture parks, Matsuura said, suggesting

HE SAID IT is vital that marine education programs start this year for students from kindergarten through high school "because we can't waste time. We want our kids at least to have exposure . . . and to provide manpower for a new industry, three years away."

Otherwise, he said, people will come in from the outside "and whoever is on top of the iceberg is going to grow."

Matsuura was the first executive director of the governor's Agriculture Coordinating Committee and he is proposing a similar committee to coordinate aquaculture and unblock any bottlenecks.

In the fisheries area, he is putting most of his efforts into bait development and a state project launched two years ago with Hawaiian Tuna Packers to tap the highly prized albacore resource off Midway.

THE NAVY allowed the albacore trollers to refuel at Midway under an agreement with the state. However, Tuna Packers didn't participate last year because of the economics involved in providing a mother ship for the fishing vessels.

Under legislation introduced by Matsuura, the state could acquire a Navy destroyer-tender which is going into mothballs May 1 and lease it out to a private operator to provide housing, power and cold storage for the fishing operations.

Matsuura said it would be towed to the fishing grounds to save fuel. And he is looking into the possibility of a refrigerated barge to bring the fish back to Hawaii, reducing costly fuel expenses for the fishermen and giving them more time to catch fish.

After the albacore season, the mother ship could be taken to Palmyra Island for bait fishing, he said.

As for the industry's input, he said, "It had better get that Kewalo Basin facility increased to the level that it can take all the fish that's going to come in."

WEATHER RELAY—This little buoy talks only to a satellite 22,500 miles away. —Star-Bulletin Photo by Craig Kojima.

Buoy Will Help Satellite Watch Pacific Weather

By Lyle Nelson
Star-Bulletin Writer

It will be only a tiny red-and-yellow speck on the ocean, but a meteorological buoy to be positioned 150 miles northwest of Kauai, and near Nehoa Island, next week will begin transmitting weather data to a stationary satellite 22,500 miles above the Pacific Ocean.

Two technicians with Computer Sciences Corp. of Bay St. Louis, Miss. — Stanley Roberts and Wayne Gill — said the buoy will:

Collect information on wave heights, wave period, wind, temperature and barometric pressure every 10 minutes, and transmit the data to the satellite every hour for 2½ years.

At that point its batteries will give out and it will have to be brought back to Honolulu for servicing.

The data will be transmitted to the satellite every hour and the information will be routed to Wallops Island, Va., and into the hands of the National Weather Service for use within seconds.

ROBERTS AND GILL SAID the Mainland is ringed with these nomad-type meteorological buoys positioned offshore from Alaska to Maine. But this is the first one which will be planted in a mid-Pacific area.

Their company is a subcontractor to the National Oceanic and Atmospheric Administration. The nation's weather service is a part of NOAA.

The buoy will be towed to its ocean home by the Coast Guard cutter Mallow which will leave Sand Island Sunday.

Roberts and Gill will supervise dropping of the 13,000 feet of nylon tether with an anchor on the end to keep the data collector in place.

It will take from four to six hours to get the line, now spread on the deck of the Mallow, over the side.

The buoy may interest fishermen, but the Coast Guard's Notice to Mariners cautions ships about staying away from the buoy's position.

State's Economic Fu

By Ron Daines
Star-Bulletin Business Editor

After two decades of robust growth, largely on the wings of a soaring tourism industry, Hawaii's economy is being buffeted by strong crosswinds that challenge its flight in the decade ahead.

Indeed, these new crosswinds are likely to test the basic fabric of the state's economic mix, a handful of relatively fragile industries providing most of the jobs and income for Hawaii's people.

State planning director Hideto Kono has likened our minimally diversified economy to market baskets of eggs with tourism increasingly comprising the biggest of the baskets.

The state's economic growth moderated in 1980, primarily the result of inflation and recession, and the forecast for 1981, offered by local economists, is for a continuation of our flat economy, paralleling similar projections for the nation as a whole.

This current and anticipated near-term weakness in Hawaii's economy is placing pressure on the eggs in the market baskets Kono describes, and cracks which are beginning to appear will need mending if the state's economy — which had a gross product of more than $11 billion last year — is to remain healthy. For instance:

—**Tourism**, which has evolved into one of the state's largest industries during the past two decades with visitors spending nearly $3 billion here last year, stopped growing in 1980 for the first time in more than 30 years and faces its biggest challenges yet — how to cope with rising air fares, competition from other vacation destinations, and negative publicity about Hawaii's crimes.

Further, many fear tourism's own growth may tarnish the things that make it attractive — the beauty of the Islands and the aloha spirit.

The anticipated near-term economic stagnation in the state's economy also is likely to affect many of the industries that support and are supported by tourism, federal spending, agriculture and manufacturing.

CONSTRUCTION, which totaled $1.5 billion in projects completed in 1980, has moderated because of record-high interest rates which have made if difficult for developers to obtain construction financing and for home buyers to afford mortgage financing to buy new housing. Continuing population growth coupled with an existing shortage of housing is likely to keep the residential construction industry building new, but more expensive, homes.

With office space now at a premium, developers should continue building new office buildings. But as the economy remains slow, fewer business formations are likely to result in reduced office demand in the future.

New government construction spending may be held in abeyance by the uncertainties in federal spending and by the spending lid placed on state expenditures.

And, the slowdown in tourism may stymie future construction of commercial facilities and hotels, many of which have been built during the past four years to handle the anticipated growth in tourism, which abated well beneath projections.

—Retail sales are suffering as the recession and a high inflation rate curtail the amount of money residents and tourists have available to spend for anything other than necessities. Further, new retailers, riding the wave of tourism's growth, have entered the competition for what dollars are available to spend, with the result that weaker retailers are being forced to close their doors.

ture Rests in Fragile

Mauna Kea Observatory

Prawn Harvest

ASTRONOMY. First Hawaiian Bank, in its November-December Economic Indicators, said, "Astronomy in Hawaii is not only already big today, but has the potential of becoming much larger and very important in world astronomical research."

The state invested $15.3 million for astronomy from 1964 through 1979 and capital investments by out-of-state organizations so far total $25.1 million, which makes astronomy a bigger industry than anthuriums, aquaculture or coffee, according to First Hawaiian Bank.

And several projects are pending which could boost investment in astronomy considerably — by as much as $200 million if all are approved.

—**Diversified Agriculture.** Long discussed as a means of helping the state broaden its income and employment base, diversified agriculture growth has been limited by rising transportation costs, high land costs and limited markets which hinder the ability to produce the goods efficiently with economies of scale.

The hope now is to expand Mainland and other overseas markets for Hawaii's tropical agriculture products such as macadamia nuts, flowers and nursery products, papayss, guavas and passion fruit.

Most agree that marketing is the key to the success of diversified agriculture. State agriculture director John Farias recently announced one marketing plan under study where Hawaii would import livestock feed from Canada and send back such products as tomatoes, onions, cabbage, mangoes, and avocados.

—**Aquaculture.** The state administration this year will ask for $1 million to be added to the aquaculture loan fund, set up in 1979 to encourage development of the industry through loans for farm acquisition and operations. Aquaculture programs include production of freshwater prawns, shrimp and oysters.

Planning director Kono said in a December 1980 newsletter that more than $20 million of new capital will be invested in aquaculture here in the next two years and, if successful, this will raise the commercial

—**Federal expenditures**, at more than $3 billion a year, remain as a major contributor to Hawaii's economy. The defense spending portion — which totals more than $1.4 billion — is likely to stay healthy as the Reagan administration emphasizes a strong national defensive posture. However, non-military federal spending could slacken as that same administration seeks to balance the federal budget by slicing a number of programs that will affect Hawaii's share of these non-military federal dollars, which amounted to more than $1.8 billion last year.

—**Sugar** continues to improve its yields through advanced technology and will register near-record earnings for 1980, estimated at $640 million. It will be tested by the stability of world sugar prices and the encroachment of urbanization and tourism on sugar acreage, which fell from its peak in 1968 of 242,476 acres to 218,773 in 1979.

—**Pineapple production**, which slumped in the early '70s after production peaks in the '60s, has stabilized and could experience a resurgence in growth aided by increased sales of fresh fruit and decreased production in other areas of the world. The industry was given some breathing room last month when the Environmental Protection Agency agreed to exempt Hawaii from a permanent ban on DBCP, a chemical pineapple growers need to control root worms.

—**Diversified agriculture** continues to grow, now contributing more than $170 million to the state's economy. But diversified agriculture is not growing as rapidly as many officials had hoped and remains as a relatively small factor in the overall economy.

—**Manufacturing activities** account for about $1.5 billion of the state's income and comprise a variety of activities such as petroleum refining and garment making, among others. Of these activities, petroleum refining, which yielded about $800 million in sales in 1979, is likely to grow in importance.

The garment industry, so closely tied to tourism, is trying to extend its reach to Mainland and foreign markets, but changing consumer tastes, rising labor and materials costs, and competition from foreign and Mainland manufacturers are keeping the industry from growing much beyond its $75 million a year in sales.

Certainly, no one is forecasting the death of Hawaii's primary industries.

Tourism, though its growth has stopped, is entertaining more visitors from overseas and is attracting more convention trade.

And sugar, with a reasonably good outlook for stabilized prices and improving prospects for bagasse- and molasses-produced energy, will continue to be a major contributor to Hawaii's economy in the 1980s.

But neither has anyone come up with a magical solution — a savior industry — that will pick up any slack in jobs and income that result from troubles in these primary industries.

Instead, hopes are being pinned on several new and developing economic egg baskets which, to date, have shown varying degrees of success.

Here's a rundown of the most promising alternatives:

—**Alternate energy**. Hawaii is more than 90 percent reliant on imported oil for its energy supply. But with the price of that oil rising to more than $35 a barrel and with some industry analysts forecasting prices of $50 a barrel or more by 1985, the development of alternative sources of energy has become a growth industry.

The stimulation provided by rising oil costs — the total imported oil bill for the state rose above $1 billion last year — and the abundance of Hawaii's natural non-oil energy resources have pushed the state into the national forefront of alternate energy development.

Solar water heaters are being installed in hundreds of homes, geothermal, ocean thermal and wind power are being tested, and several of the state's sugar companies, in conjunction with county governments, are developing facilities that will burn bagasse (what's left over after sugar juice has been squeezed from sugar cane), wood chips and municipal waste.

Looming as another potential energy source is ethanol produced from sugar and combined with gasoline to make gasohol which can be burned in Hawaii's growing fleet of motor vehicles. However sugar-cane growers currently get more money producing sugar from sugar cane than producing ethanol, and gasoline still costs less than gasohol. So, until sugar prices come down and gasoline prices go up, gasohol remains uncompetitive.

Market Baskets

Manganese Nodules

production to a gross of more than $20 million a year.

The state remains optimistic about freshwater prawn development even though setbacks cut 1980 production below projections. Production in 1980 was only 300,000 pounds of prawns valued at $1.2 million, well below the projected 1980 output of 800,000 pounds.

—Commercial Fishing. Several developments signal growth for commercial fishing: a Hawaii Fisheries Coordinating Council has been appointed; the Pacific Tuna Development Foundation has recommended $360,000 in federal funds for four Hawaii fisheries research projects during the next year, and matching funds are available; and at least three fishing vessels are under construction for the Hawaii fleet.

A plan completed in late 1979 by the state Department of Planning and Economic Development called for quadrupling of the state's fish catch by 1990 and continued, rapid growth through the turn of the century.

—Manganese Nodule Mining. Kent M. Keith, manager of the state's manganese nodule mining program, the only one in the nation, has said that various estimates have been placed on how much eventually might be invested in the industry here, with one projection at $1.5 billion.

A 1978 report, "The Feasibility and Potential Impact of Manganese Nodule Processing in Hawaii," estimated a single processing plant would have annual revenues of $262 million.

The mining of manganese nodules, potato-shaped nuggets rich in manganese, cobalt, nickel and copper, long has been touted as a major growth industry for the state, particularly the Big Island where it is projected that geothermal power could be used to process the nodules.

However, manganese nodule mining faces several obstacles to development. The federal government has held off issuing a green light on mining the rich metal deposits until the impact on the environment is assessed and until jurisdiction over international waters is settled.

And even if those questions are resolved, Hawaii still may lose out should nodule miners choose Mainland sites for processing the metals.

—Regional Center for Trade and Business. The state administration's plan to develop Honolulu's waterfront, with the inclusion of a world trade center near Aloha Tower, could help to entice more corporations with multinational operations in the Far East to establish regional headquarters here, and appeal to consuls, freight forwarders and middlemen involved in Pacific trade.

Under the regional center concept, 33 multinational corporations now have offices here. And George Myers, who heads the state's program, said another 60 companies have expressed an interest in opening such an office in Hawaii. However, some state officials have been critical of the world trade center idea and there are likely to be some hard-fought battles before the administration's goal is realized.

Most of these alternative industries are still in their infancy; all face an uphill path toward maturity and becoming a vital, contributing part of the state's economy.

Sampan Aground

The Neptune, an 80-foot sampan with nine persons aboard, grounded on the reef near Mokulua Island off Lanikai early this morning but was in no immediate danger of sinking, the Coast Guard rescue center said.

Pumps were dropped by a Coast Guard helicopter after the fishermen aboard reported the ship was taking on water. The cutter Cape Corwin was to standby in case of any problems.

The crew from Kewalo Basin reported their problem at 5:40 a.m.

Isle Population on the Rise, but Wages, Jobs Lag Behind

By Shurei Hirozawa
Special to the Star-Bulletin

The Hawaii economy created a record number of new jobs in the decade of the 1970s, a period marked by rapid growth for the state. This record expansion was led by the sharp gain in tourism, which by itself generated more than half of the new jobs during the decade, both jobs created directly by the visitor industry and indirectly by support services and the multiplier effect of income from tourism.

In contrast, the employment outlook for 1981 and the new decade appears less bright. The 1980s could turn out to be a decade reminiscent of the 1945-55 period, when there was an out-migration of youth to seek more and better opportunities on the Mainland.

By the end of 1980, the average monthly number of jobs in Hawaii was 447,200. This was an increase of 115,600 jobs over the 1970 total, a gain of 35 percent and the largest aggregate growth ever recorded over a decade. The state's Input-Output Model shows tourism accounting for 122,000 jobs in 1980, an increase of 68,000 jobs over the 1970 total of 54,000.

cent above the national average in 1969, increased steadily to 29 percent above the national average by 1978; the intermediate budget, from 20 percent to 24 percent above in the nine-year span; the higher budget, from 26 percent to 30 percent higher.

Now the job outlook is beginning to change for the 1980s as tourism may not be able to match its growth of the '70s. The official state projection that was prepared two years ago shows visitor arrivals increasing an average 217,000 annually during the 1980s, about the same aggregate increase as in the 1970s. This projection for the '80s appears too optimistic, particularly for the next few years.

The conditions that prevailed in the early 1970s were ripe for a tourism boom. The conditions today militate against a rapid expansion. In 1970, the jumbo jets had just made their appearance, and the lift capacity to Hawaii was increased substantially. Hawaii also had completed a huge hotel building program, and the rooms had to be filled. Transportation and ground package costs were attractive, disposable income was increasing, and Hawaii took this opportunity to build a mass market.

force. This is just what HSOICC (Hawaii State Occupational Information Coordinating Committee) is doing. Organized in 1978, HSOICC has two big projects going: Career Kokua, a computerized library of occupational and educational information, and the Hawaii occupational planning system.

CAREER KOKUA helps students, job seekers, and other users find out quickly about occupational opportunities in Hawaii and how to train for them. The first occupational profiles have been completed, and Career Kokua has opened 39 user sites to date, 16 of them in computer terminals placed in four schools on the Big Island and 12 on Oahu; the remaining 23 are manual systems distributed on the five major islands.

A user can go to a computer or a card file at a site and get immediate answers about occupations and the training and skills required, plus wages, benefits, working conditions, outlook for employment, and other information. HSOICC's goal is 210 sites around the state for the aid of 100,000 users.

TOURISM, THEN, generated close to 60 percent of the new jobs created during the 10-year period. This is not surprising. Those sectors that depend on the visitor for part to all of their business showed large increases in jobs: hotel services, up 12,370 or 92.5 percent; other services, 33,850 or 77.2 percent; retail trade, 34,070 or 64 percent; and finance, insurance, and real estate, 13,500 or 74.8 percent.

Despite a substantial gain in population (net in-migration was at a record level for the decade), the growing labor force was easily accommodated by the faster growth in the number of jobs. This kept the unemployment rate in check during the decade except for two years following the 1974 recession.

The rate stayed well below the national average for most years, and improved substantially in the last half of the decade, dipping below 5 percent for a few months in 1980.

Due to the large numbers working, total personal income increased much faster than the national average gain between 1969 and 1978, according to the U.S. Department of Commerce. But Hawaii paid a price for being so well provided with jobs. The proliferation of lower-income jobs sharply reduced Hawaii's ranking in per capita income in relation to the other states between 1969 and 1978. In 1969, Hawaii's per capita personal income was 14 percent above the national average.

By 1978, it had dropped to 7 percent above the national average, and the forecast is for a continued decline to the year 2000 to a level slightly below the national average. The New England, Mid-Atlantic and a few Midwest states also experienced declines, but in only a few states was the drop as steep as Hawaii's.

During the past decade, manufacturing and related private service-type industries continued to migrate to the Western and sun-belt states generally from the Northeast, Mid-Atlantic, and Midwestern states to take advantage of relatively low wage rates, taxes, energy costs, and land costs, and the relatively mild climate.

POPULATION FOLLOWED, as the 1980 Census confirmed. This trend is expected to continue. The Western and sun-belt states, therefore, are not only getting increasing population but also thousands of higher paying jobs which have been lifting those states' per capita personal income. However, Hawaii is only getting increasing population but not the industries and their higher-level wages.

To compound the drop in per capita personal income, Hawaii's cost of living is rising faster than most other states. The Bureau of Labor Statistics' budget for a family of four in Hawaii shows the following: the lower budget, which was 24 per-

Conditions today are quite contrary. The huge escalation in crude oil prices has sharply increased jet fuel costs, forcing airlines to ratchet up air fares and making them prohibitive for those whose real income have been diminishing in recent years.

It's like closing off part of the huge airborne land bridge that made travel to Hawaii affordable for millions and fueled the great tourism boom of the past two decades. In addition, inflation has taken its toll of other vacation costs, such as forcing local room rates to rise 70 percent in the past five years. Hawaii hotel rates are still a comparative bargain, however.

THERE ARE SOME sectors that Hawaii can look to if tourism falters, such as diversified agriculture, alternate energy, manufacturing, forestry, financial services, fishing, and government.

Increasing production of export crops and food for local consumption, and growth of commercial aquaculture should help diversified agriculture. There is the potential for diversified manufacturing, which was flat in the '70s, to provide more jobs this time around. Increased processing of diversified agricultural crops will mean more jobs.

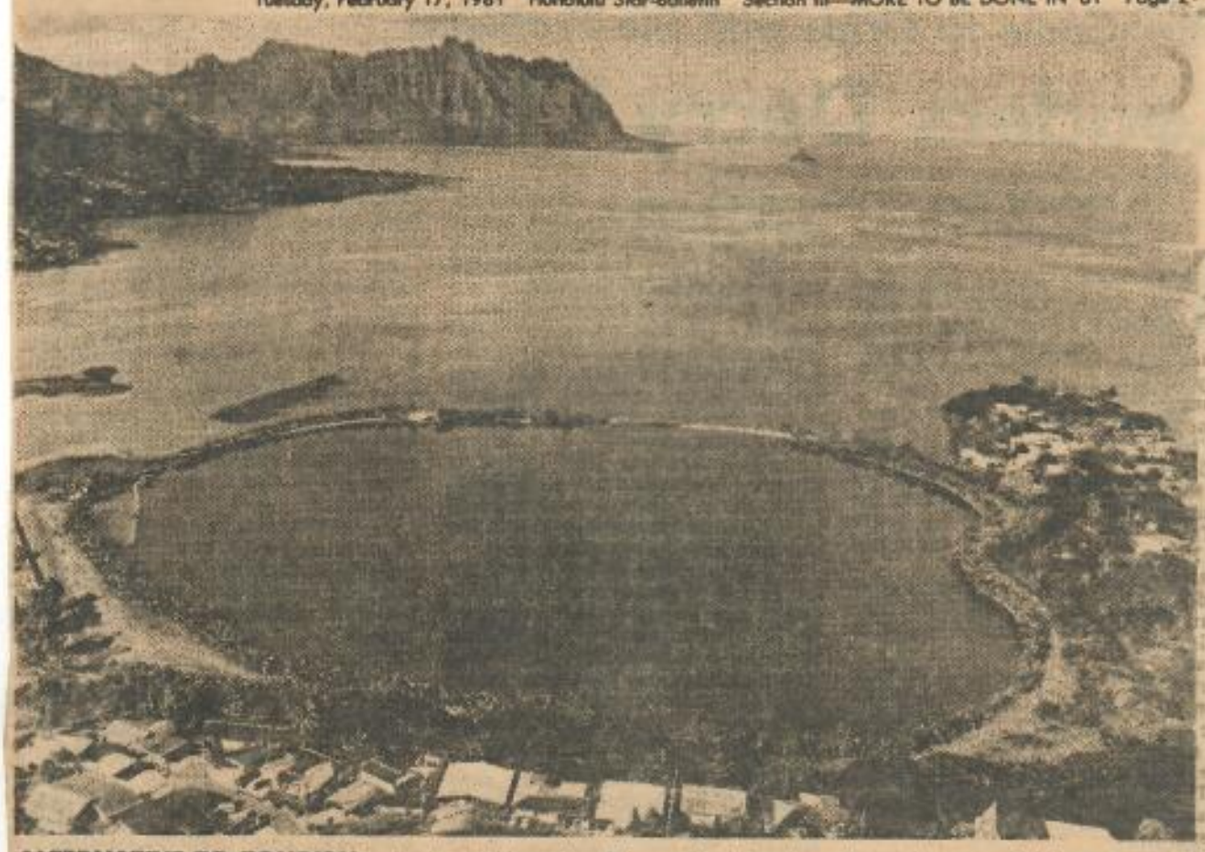
Commercial generation of geothermal, wind, solar, and OTEC energy in the latter half of the decade will mean more jobs to man the new power network. Geothermal energy may power such activities as food processing, light manufacturing or metals processing such as manganese nodules, which will provide better paying jobs.

Tree farms of eucalyptus, koa haole, and other fast growing trees to be used as fuel for power generation could mean a new industry and new jobs. Financial services will also expand as Hawaii benefits from the continuing growth of economic development of the Pacific Basin.

Fishing is making a better organized attempt at a comeback, and this is another potential job creator. State and county jobs increased substantially in the last decade, but the state may not do as well now with a constitutional limit on its spending.

The list looks impressive but the economic sectors the state will have to depend on will fall short of need. The probable scenario for the 1980s then appears to be a smaller gain in jobs resulting from the growth of tourism, and the inability of the other sectors to fill the gap. This could mean an out-migration of some of Hawaii's youth to seek opportunities elsewhere, or a slowdown in in-migration, or both.

In anticipating such a decline in employment opportunities, it would be prudent to help youth match their skills with available jobs in order to facilitate their entry into the labor



ALTERNATIVE TO TOURISM—An intact Hawaiian fishpond in Hauula reflects the potential in a new and growing industry — aquaculture — with products designed for both export and local consumption. —Star-Bulletin Photo by John Titchen.

Worst Year Ever for Salmon Fishers

H-4 Honolulu Star-Bulletin Thursday, December 25, 1980

COOS BAY, Ore. (AP) — Bob Frazell took a $30,000 pay cut this year. Jim Sugg's income dropped by $25,000. Their buddy, Fred Bills, who lost $16,000, has already told his children "this Christmas is going to be different."

The three are Oregon salmon fishermen who, along with thousands of others in Washington and Northern California ports, have suffered the worst year old-timers can recall.

As a result, loans go unrepaid, leaky vessels unrepaired. Some fishermen have dropped out of the business altogether.

By rough estimates, about 20,000 commercial fishermen prowl the coastal waters of the three states for fish, with most of them in search of the several varieties of salmon. A combination of bad weather, elusive fish and shortened seasons tossed the fishermen into stormy economic waters this year.

IN WASHINGTON, this year's catch of chinook and coho salmon was 518,000, compared with last year's 812,700, according to officials.

In Oregon, fishermen caught only $7.8 million worth of salmon, down from $17 million last year, state figures say. Comparable California figures were unavailable because many of that state's fishermen fish waters off the coasts of Oregon and Washington.

"I doubt there's a boat that couldn't be bought right now if somebody went out there and made an offer," Sugg said.

The fishermen's plight in Coos Bay has been compounded by the depressed wood products industry, which provides for the majority of the coastal community's employment. Mill closures and layoffs bumped Coos County unemployment from about 8 percent in October of last year to about 15 percent last month.

AND ALTHOUGH the fishermen make up a very small percentage of the local work force, their bad fortune has a rippling effect that has swept over other parts of the community.

"When that area suffers, what the hell, we all suffer," said Doyle Harroun, owner of a western clothing store in nearby North Bend.

Harroun helped collect signatures of about 150 store owners and managers this autumn that asked Gov. Vic Atiyeh to declare businesses and fishermen in Coos County and its southern neighbor, Curry County, eligible for federal low-interest loans.

The move resulted in establishment of a federal Small Business Administration loan program — for salmon fishermen alone.

Other fishermen and the small business owners say it's not enough, and state officials are asking the federal government for more help.

HARROUN'S STORE is located in one of the area's biggest, newest shopping centers. But five shops in the center have gone bankrupt in the past few months, he said.

"One guy went down, he was doing $600,000 a year," Harroun said. "I've forgotten all about making money. I just hope to break even."

"It's really a sad state of affairs," said Bruce Laird, a local banker and a commissioner for the Port of Coos Bay. As a banker, he won't reveal figures about loans and credit card accounts, but he acknowledges they are bad.

As a port commissioner, he says there is a delinquency rate of 15 percent to 18 percent on berth payments in the port. And 5 percent to 8 percent of the moorings are vacant — that hasn't happened in five years.

Most of the fishermen blame the Pacific Fisheries Management Council for their problems. The council, charged with guarding coastal fish resources and made up of officials from California, Washington, Oregon and Idaho, this year postponed the start of the fishing season and shortened the rest of it.

THE COUNCIL defended its action by saying that fewer salmon were returning to swim upstream to spawn, and without the restrictions fishermen would catch most of the adult salmon.

But salmon fishermen charge that the salmon are being overprotected and, as a result, the fishermen are suffering the consequences.

"The economic disaster was manmade," said Bills, who some years ago gave up a lucrative physician's practice in Reno, Nev., to make fishing, formerly his hobby, a profession.

The fishermen also complain that sport fishermen were allowed to fish during those first weeks while the commercial fishermen sat idle, watching the charter boats bringing in big catches.

"When the fish were here, we couldn't fish and they were here," said Jim Baumgartner, who also blames the planning policies of the fishing council.

"They didn't pay a damn bit of attention to us," says Baumgartner. "If they don't listen to us, where do we go?"

ROLLIE MANTAGNE, a salmon planning coordinator for the council, says the fishermen should be more strident in seeking government relief. But he adds that fishermen need to diversify or they will face even tougher days with declining salmon catches.

"The overriding issue is you're working with a declining resource," he said.

The fishermen say the agency has been wrong in its predictions about the fish runs. And they say the government is not doing enough to provide alternatives, such as salmon enhancement projects.

What it means, said Bills, is that the outlook of the independent fisherman has changed.

"We're not talking about fishing or boats anymore," he said, "We're talking about politics."

Hearing on spiny lobster rules

A public hearing on possible changes in fishing regulations for spiny lobsters is set for 7 p.m. tomorrow on the second floor of the Amfac Marine Supply building at Kewalo Basin.

The proposed changes include altering the minimum shell length for spiny lobster fishing in the northwest Hawaiian islands to 7.7 centimeters, or about 3 inches, which is smaller than under present state regulations. The changes would apply to waters 3 miles from shore.

New regulations also would prohibit fishing in waters shallower than 10 fathoms and within 20 miles of Laysan Island. Lobster traps would have to be constructed so as not to harm the Hawaiian monk seal.

The Western Pacific Regional Fishery Management Council is holding the hearing. The U.S. Department of Commerce will implement the regulations if approved by the council.

A-8 Honolulu, December 7, 1980 The Sunday Star-Bulletin & Advertiser

A-2 Honolulu Star-Bulletin Friday, December 19, 1980

Boat Aground

The 30-foot fishing boat Taiyo Maru out of Honolulu ran aground on a reef two miles east of Kaunakakai, Molokai this morning, the Coast Guard said.

Tomoharu Okamoto, the skipper and the only person aboard, was rescued unhurt and returned to Honolulu by helicopter.

CRAIG MC Fines?

A-20 Honolulu Star-Bulletin Monday, December 8, 1980

Lobster Fishing Plan to Be Aired Tonight

A plan designed both to protect lobster resources and encourage lobster fishing in the Northwest Hawaiian Islands will be presented at a public hearing at 7 tonight in the Amfac Marine Supply building at Kewalo Basin.

The Western Pacific Fishery Management Council drafted the management plan with proposed regulations for spiny lobster fishing in waters three miles offshore and is seeking comments before finalizing it.

If approved, the regulations will be implemented by the U.S. Department of Commerce.

They include a minimum length of about three inches for spiny lobsters in the Leeward Hawaiian Islands, which is smaller than the length allowed under state regulations.

State Sen. Wadsworth Yee, council chairman, said the size limit is expected to protect the reproductive potential of the lobster population.

Fishing also would be prohibited in waters shallower than 10 fathoms, and within 20 miles of Laysan Island, to prevent unfavorable effects on marine mammals or endangered species in the area.

TRAPS ALSO would have to be constructed so as to prevent accidental harm to the Hawaiian monk seal.

Yee said the council tried to avoid placing additional burdens on the commercial fishing industry in drafting the plan and yet protect the biological and environmental resources.

He noted that work on the plan began in 1977 when there was little knowledge of the lobster resources. But commercial fishing has greatly expanded since then and lobsters are expected to be a major resource in the fisheries development.

Lobster catches in the Northwest Islands are expected to exceed 100,000 pounds this year, 10 times more than the catch in the main Hawaiian waters.

Yee said the lobster management plan is expected to mesh with plans of the National Marine Fisheries Service to establish a critical habitat for protection of the monk seal.

No 'long-term' danger found in sea-dumped clay

The state has found no evidence of "long-term environmental damage" from the dumping of 2,200 tons of clay from a Greek freighter which ran aground near French Frigate Shoals earlier this year.

The freighter Anangel Liberty ran aground April 27 on a reef near French Frigate Shoals. It was freed 11 days later, after 2,200 tons of kaolin — an industrial clay — was dumped overboard.

At the time, Susumo Ono, chairman of the state Board of Land and Natural Resources, protested the dumping "in the strongest terms." Ono asked the state attorney general for an opinion on possible court action against the ship's owners.

The state, however, is now recommending, "No further legal action against the owners . . . be pursued since subsequent surveys have not yielded evidence of long-damage."

The recommendation is made in a report released this week and signed by Ono and Kenji Ego, state fish and game director. The report will be presented to the Board of Land and Natural Resources when it meets today on Maui.

It says kaolin particles were "shown in laboratory experiments to kill larval American lobsters by clogging their gills."

"Kaolin clay spills have been reportedly implicated in fish kill incidents in New Jersey and the Virgin Islands," the report continues.

It states that federal officials on the regional pollution response team authorized dumping of 360 tons of kaolin before state officials gave their approval, citing the need to free the ship before its diesel fuel was spilled.

The report says that the site was inspected by marine scientists two weeks after the ship was freed and again in July by Fish and Game personnel, who "were unable to detect overt environmental damage . . . as a result of the dumping of the clay."

The ship ran aground "because of human error in navigation," a Coast Guard spokesman said. The Coast Guard and Navy's costs in freeing it are expected to total roughly $400,000.

obituaries

For the Pacific Basin

A-2 Honolulu

Fisheries Developm

By Helen Altonn
Star-Bulletin Writer

A plan to strengthen U.S. participation in development of Pacific fisheries resources was unveiled here yesterday with enthusiastic support from Guam's representatives.

The Western Pacific Regional Fishery Management Council approved the intent and direction of a report on the plan and asked that the federal and island governments review it as soon as possible.

Paul Callaghan, Guam member of the council, had asked for a vote of support of the plan and a request to the governors of Hawaii, Guam, American Samoa and the Commonwealth of the Northern Mariana Islands to carry out the recommendations.

But Hawaii and federal government officials on the council pointed out that the plan requires high-level policy changes—"some of which which could turn Washington upside down."

They said they couldn't take action on it until it is reviewed by all agencies concerned.

John Harville, executive director of the Pacific Marine Fisheries Commission in Portland, Oregon, drafted the plan under a contract with the National Marine Fisheries Service.

HE PRESENTED it to the council at a meeting yesterday at the State Capitol.

Callaghan noted that he wasn't

New Fisheries Council Program Is Under Way

The Hawaii Fisheries Coordinating Council, established under a law passed by the last Legislature to plan and coordinate statewide fishing activities, was scheduled to begin work today.

The council has 19 members appointed by Gov. George R. Ariyoshi, including 11 voting members and eight non-voting members.

Susumu Ono, head of the state Board of Land and Natural Resources, is chairman of the council.

The group was to meet at 1:30 p.m. in the land department's board room, with an agenda including an oath of office, election of other officers and a discussion of the organization's powers and duties.

Stanley Swerdloff, who prepared the statewide fisheries masterplan as a consultant to the land department, was to discuss "Hawaii's Fisheries — Past, Present and Future."

Henry Sakuda, chief of the state fisheries branch, was to describe proposed programs for the next two years.

ONO SAID THE formation of the council is one of the first tangible results of the fisheries masterplan and it is a significant step toward solving problems of commercial and recreational fishermen.

The council has broad representation from all fishing interests as well as state, county and federal agencies and other organizations related to the fisheries industry.

Voting members are: Louis Agard, Winfred Ho and Frank Goto, all of Oahu; Bill Choy, Maui; Asahi Okamoto, Kauai; Alika Cooper and Charles Spinney, Big Island; Hideto Kono, state planning and economic development director; Ryokichi Higashionna, state transportation director; John Craven, state marine affairs coordinator, and Ono.

Non-voting members include the county economic development directors — Fred Matsumoto of Maui, Duane Black of the Big Island and James Kurita of Kauai.

Also, Jack Davidson, head of the Sea Grant Program at the University of Hawaii; state Sen. Wadsworth Yee, chairman of the Western Pacific Regional Fisheries Management Council; Richard Shomura, director of the Honolulu Laboratory, National Marine Fisheries Service; Doyle Gates, western programs administrator, NMFS, and Jerry Norris, executive director, Pacific Basin Development Council.

Star-Bulletin, Friday, November 14, 1980

ent Plan Unveiled

keen about the study when it was first proposed to the council.

"I thought it was another Mainland haole coming in to tell us our needs...that it would be another report to sit on the shelf," he said.

But he said, "It is very perceptive, a good job of analyzing the needs of the Island territories," and he emphasized, "I don't want this ball to drop."

He said it is necessary to move quickly on the plan because of meetings in the near future by the Pacific Basin Development Council, formed by the governors of Hawaii, Guam, American Samoa and the Commonwealth of the Northern Mariana Islands.

Harville's plan calls for the creation of a Territorial Affairs Task Force by the president to coordinate federal departmental actions on Pacific development programs.

The plan also proposes that:

— The National Marine Fisheries Service assign full-time field representatives in Guam and American Samoa.

— American Samoa, Guam and the Commonwealth of the Northern Mariana Islands each prepare a long-range plan for development of marine resources and establish a Governor's Fishery Task Force for liaison purposes.

— The Pacific Basin Development Council and the Pacific Tuna Development Foundation should provide regional assistance and coordination to the Pacific Basin fisheries development.

— A small, highly qualified secretariat should be organized with a manager-director, secretary-bookkeeper and scientific and technical experts to serve the development.

IN OTHER ACTION during a two-day meeting, the council discussed a controversial plan proposed by its billfish advisory panel to ban foreign longline fishing within the 200-mile fishery conservation zone around the Hawaiian Islands.

J. W. Sutherland, panel chairman, said the proposal is not intended to ban tuna fishing—which can be done by other methods—but to prevent indiscriminate taking of Pacific blue marlin which is valuable to sport anglers.

The panel said total assets for the Kailua-Kona billfish fleet are more than $2.2 million and wages are more than $1.3 million. If figures for the state's entire recreational fleet are included, "it is entirely possible that they will equal or exceed the $8,337,117 value of the catch of the foreign longline fleet within the entire fishery conservation zone around Hawaii," the panel reported.

The panel also presented several options which would close foreign longlining within the conservation zone for parts of the year, if the council is unable to accept a total prohibition on that fishing method.

The council deferred action on the recommendation to obtain more data, but it is expected to face rough going in future council action.

Preservationists Call Decision a Victory

Land Board Wants EIS for Young Building

Continued from Page One

precedent requiring environmental impact statements for demolition of all other buildings in Hawaii.

"I don't want this case to prejudice other cases, particularly those involving small landowners," Higashi said.

But a new unanimous vote was taken for the environmental impact statement when it was pointed out that defeat of the measure automatically would permit demolition of the building. A 90-day deadline for action on the matter expired Oct. 14, but the owners agreed to an extension.

The board had three alternatives for action during the 90-day period under the historic site law.

It could authorize state purchase of the building through condemnation proceedings, permit the owners to go ahead with their plans for the site, or undertake or permit the investigation, recording, preservation and salvaging of any historical information through an environmental impact statement.

Because of limited state funds, the parks division said the requirement for an environmental impact statement is the only feasible course of action.

IN OTHER business at a meeting here yesterday, the board accepted a recommendation from Kenji Ego, state fish and game director, to take no legal action against the owners of a Greek freighter, the Anangel Liberty, which ran aground on reefs at the French Frigate Shoals in April.

The vessel was pulled off the reef after receiving authorization to dump up to 3,000 tons of kaolin clay. It was carrying 19,000 tons of clay and 165,000 gallons of diesel fuel.

The dumping was allowed to prevent a major oil spill because of high surf and worsening weather conditions.

However, the clay consists of dust-like particles of silica and aluminium, chemically bound by phosphates, shown in laboratory experiments to kill larval American lobsters by clogging their gills.

According to Ego, kaolin clay spills reportedly have been implicated in fish kills in incidents in New Jersey and the Virgin Islands.

But he said fishes, monk seals and sea turtles which inhabit the French Frigate Shoals have not been affected by the clay.

Fish and game personnel who surveyed the Shoals in July were unable to detect "overt environmental damage" as a result of the clay dumping, he said.

A-2 Honolulu Star-Bulletin Saturday, October 25, 1980

25Oct 1980 A1 HSB

Land Board to Request EIS for Young Building

By Robert McCabe
Maui Correspondent

KAHULUI, Maui — The state Board of Land and Natural Resources voted yesterday to require an environmental impact statement for the requested demolition of the historic Alexander Young Building in downtown Honolulu.

The action was hailed in Honolulu as a victory for a group that has been fighting to preserve the building since April.

"We are extremely thrilled," said Susan Merchant, executive director and founder of the Friends of the Alexander Young Building.

"We are very hopeful that the owners will take this as a strong sign that this link to our past is a very important one and want the Alexander Young Building to stay."

Northwestern Mutual Life Insurance Co., which owns the building, has proposed a 29-story commercial complex for the site.

State Parks Administrator James J. Yamashiro said the requirement for an environmental impact statement is to "ensure (that) environmental concerns are given appropriate consideration."

THE BOARD'S ACTION does not mean that the 75-year-old building — listed on both the Hawaii and national registers of historic places — will be torn down and replaced.

However, demolition could take place if all the environmental and historical concerns are met, following the preparation of the environmental impact statement.

Yamashiro said the land department "remains hopeful that the owners do decide in favor of preservation."

The requirement for an environmental impact statement was recommended by the state Parks Division, which has jurisdiction over the building, and approved subject to a legal opinion on whether the board has jurisdiction in the matter.

In acting on the recommendation, the board at first found itself at an impasse when two of four members present voted against the requirement. They were Oahu member Moses Kealoha, who chaired a dicussion on the topic, and Big Island member Roland Higashi.

BOARD CHAIRMAN Susumu Ono, who also serves as the state historical preservation officer, and Maui member Thomas Yagi voted for the recommendation.

Higashi said he was concerned that the action would establish a

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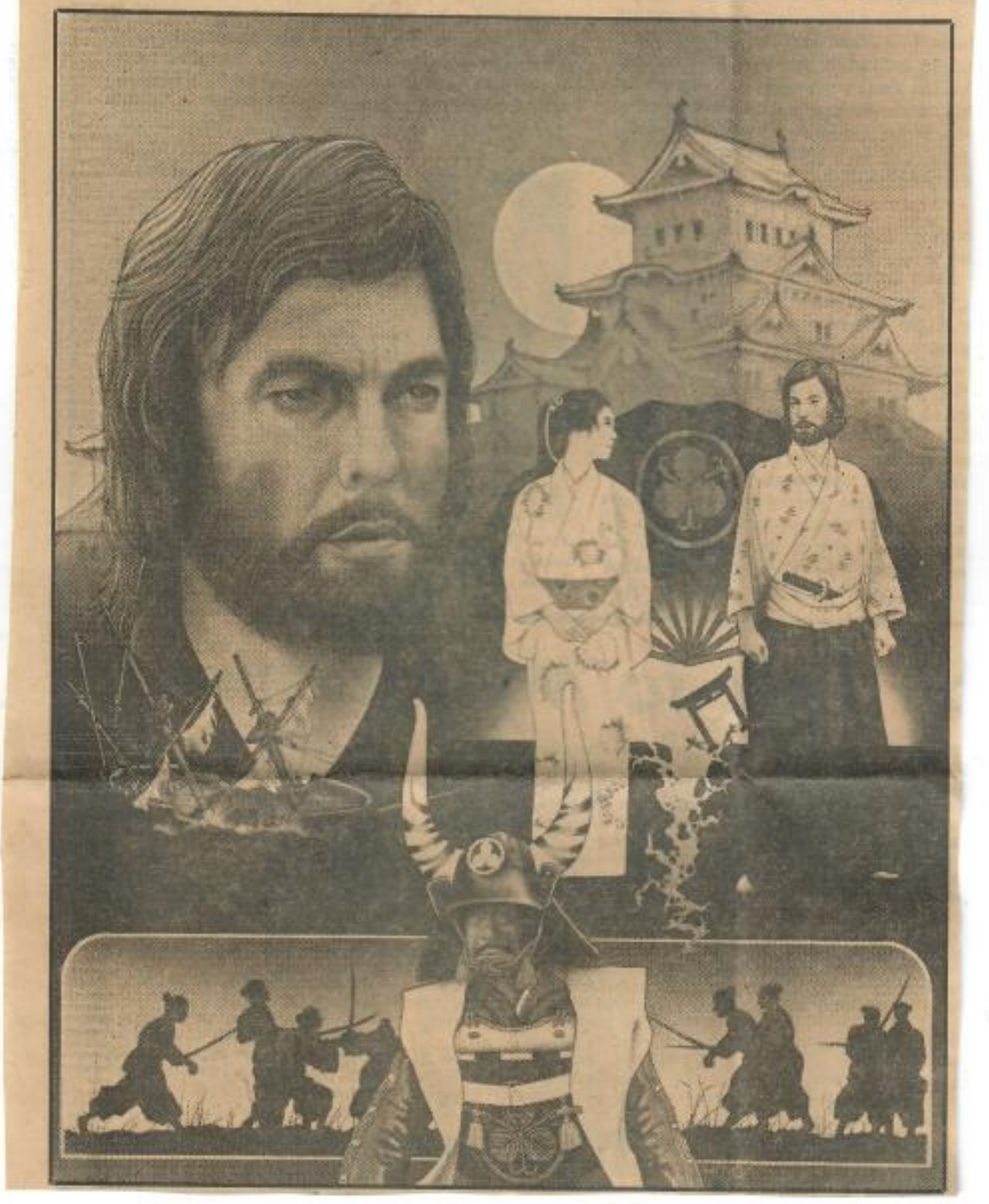
SHŌGUN



PART ONE

The year is 1600. The Erasmus, a Dutch trader-warship under the command of English pilot John Blackthorne (Richard Chamberlain) is blown ashore during a violent storm near the village of Anjiro in Japan. Blackthorne had hoped to trade in East Asia, but his dreams of riches are squelched when he discovers that Portuguese Jesuits have already established trade agreements with Japan. England and Portugal are at war, and the Jesuits consider the Protestant Englishman to be an enemy as well as a heretic.

The Japanese regard Blackthorne and his crew as barbarians and imprison them in a pit. The Westerners are shocked by the savagery of the village samurai culture, just as the Japanese are insulted by the European's bad manners. After confrontations with Omi (Yuki Meguro) and Lord Yabu (Frankie Sakai), ranking samurai of Anjiro, Blackthorne realizes that the lives of his crew depend upon his behavior.

Renamed "Anjin" (pilot) by his captors, Blackthorne is summoned to Osaka by Lord Toranaga (Toshiro Mifune), one of the daimyo (warlords) of the country. He travels there on a galley piloted by Rodrigues (John Rhys-Davies), a Portuguese navigator. After Blackthorne saves Rodrigues' life during a night squall, the two enemies strike up an uneasy friendship.

Five lords, the Council of Regents, rule Japan. The two most powerful are Lord Toranaga and his archrival Lord Ishido (Nobuo Kaneko). The Council is meeting at Osaka Castle, which is under Ishido's command. Also in Osaka is the Jesuit Mission where the Father Visitor of Asia, Carlo dell'Aqua (Alan Badel), and his chief negotiator, Father Alvito (Damien Thomas), who is fluent in Japanese, are alarmed by Toranaga's interest in Blackthorne. They fear the Englishman will be a threat to their lucrative trading in silks and gold.

At the castle, Blackthorne refuses to have Father Alvito serve as his interpreter to Lord Toranaga. Mariko (Yoko Shimada), a beautiful lady samurai and a Catholic convert, translates for him. Blackthorne explains he has come to Japan in peace to trade. The conversation is interrupted by the arrival of Lord Ishido, who orders Blackthorne detained in Osaka's "death row." In the wretched prison, the pilot meets Friar Domingo (Michael Hordern), a Franciscan priest. He tells Blackthorne of the Jesuit influence in Japan and of the Black Ship, which annually sails for Europe with enormous Jesuit profits from trade.

Where East Baffles West

UNLESS you've been on French Frigate Shoals reading Archie comic books, you know that tonight begins the first installment of a 12-hour TV extravaganza called "Shogun."

And just in case you can't spend all 12 hours this week in front of the TV, or you have a poor memory, the *Star-Bulletin's* Today section will publish, beginning today, a synopsis of each night's program. Look at the lower left and you'll see the first part.

"Shogun" is a fictional account based on real people and events in 17th-century Japan. It centers on an English ship captain, John Blackthorne, whose Dutch trader-warship is hammered ashore in Japan by a violent storm.

The Japanese find them rude and foul-smelling, and heave the odorous lot into a pit. After such an introduction, things could only get better or it wouldn't have been a 1,200-page book.

And they do, at least for Blackthorne, who comes to be known as "Anjin-san" and an increasingly valuable pawn in a struggle for control of the country.

"Shogun" has violence, love, religion, culture shock, intrigue and even (a few) sub-titles. If it doesn't put "Roots" in the shade, there will be some very uncomfortable samurai at NBC. It cost the No. 3 network $20 million.

It was adapted from James Clavell's beefy but riveting novel of the same name. Whether NBC does it justice is still a jump-ball. But if NBC gave it 12 prime-time hours, "Shogun" has to be an improvement on "Charlie's Angels" —even if the costumes cut down on the jiggle quotient.

On the premise that not even network TV can obliterate all the educational possibilities in "Shogun," the Cultural Information Service of New York has published a dandy, six-page guide to the show.

"SHOGUN," they point out, is ripe with possibilites for informal study and "challenges us to become something more than passive spectators."

Some of the most intriguing angles are anthropological. Suicide, for example.

The Western concept of suicide is that it is either the ultimate power trip or a cheap cop-out. In the Japanese culture, however, it is respected as, in the words of author Ruth Benedict, "an honorable and purposeful act."

A quiet moment in 'Shogun' for Blackthorne and Mariko.

The difference between Western and Japanese interpretations is important in "Shogun." And there are other factors, ranging in subtlety from the arrangement of a Japanese room and its effect on how people relate to the Japanese penchant for sudden, blood-curdling violence.

This "interplay of cultures," as the guide puts it, has already caused some misunderstanding.

A squeamish critic for the *New York Times* knocked "Shogun" for its "regular doses of violent action." The guide points out, however, that the violence (including a beheading and a scene in which the Westerners are urinated upon in the opening segment) is a realistic depiction of the 17th-century samurai culture.

As a forerunner to the Ugly American, the haughty Blackthorne is a classic case of blundering culture shock. He can't speak the language, doesn't know how to behave and doesn't know Zen from cream cheese.

His story, therefore, is as much an educational process as it is a romantic adventure. To understand the tea ceremony, spontaneous poetry, landscape gardening, sexual practices and Japanese architecture, he must first learn that while English is strictly for communication, Japanese is a means of sensing another's mood.

HIS STORY, by the way, is actually the story of Will Adams, the English pilot of a Dutch ship that reached Japan in 1600. A powerhouse named Ieyasu, the first Tokugawa Shogun, was the prototype for Blackthorne's benefactor, Lord Toranaga.

Adams sailed for the African coast and India in 1598 as the navigator and second-in-command of a Dutch ship called the Charity. It was part of a five-ship fleet, which was blown of course, forced to change destinations, suffered storm and sickness and which, by the time they reached Chile, had dwindled to a melancholy armada of two.

The Charity sailed on to Japan, arriving in April, 1600, with less than half its crew, and fewer still who could even stand. Adams advised the shogun on commercial matters, navigation and ship-building, and became valuable as an interpreter and general source of information on Europe.

He was rewarded richly for his services, married a Japanese woman and fathered two little *anjins*. However, the shogun refused to let him leave Japan. Increased trade with the smelly Europeans made him too valuable as an interpreter.

He died in 1620 at the age of 56. There is an area in Tokyo today called Anjin-Cho (which means "pilot district") where Adams' memory is celebrated every year.

For a copy of the viewer's guide to "Shogun" and its bibliography, write the Cultural Information Service at P.O. Box 92, New York, N.Y. 10156.

Meanwhile, as you watch "Shogun," remember this tidbit from Confucius: "Human beings draw close to one another by their common nature, but habits and customs keep them apart."

—John Christensen

Star-Bulletin
Today
Features
Entertainment
Section B
Honolulu
Monday September 22 1980

Taiwan boats in 200-mile zone

Three Taiwanese fishing boats suspected of violating U.S. territorial fishing waters may be fined up to $20,000 each, Bill Streeter, senior special agent for the National Marine Fisheries Service, said yesterday.

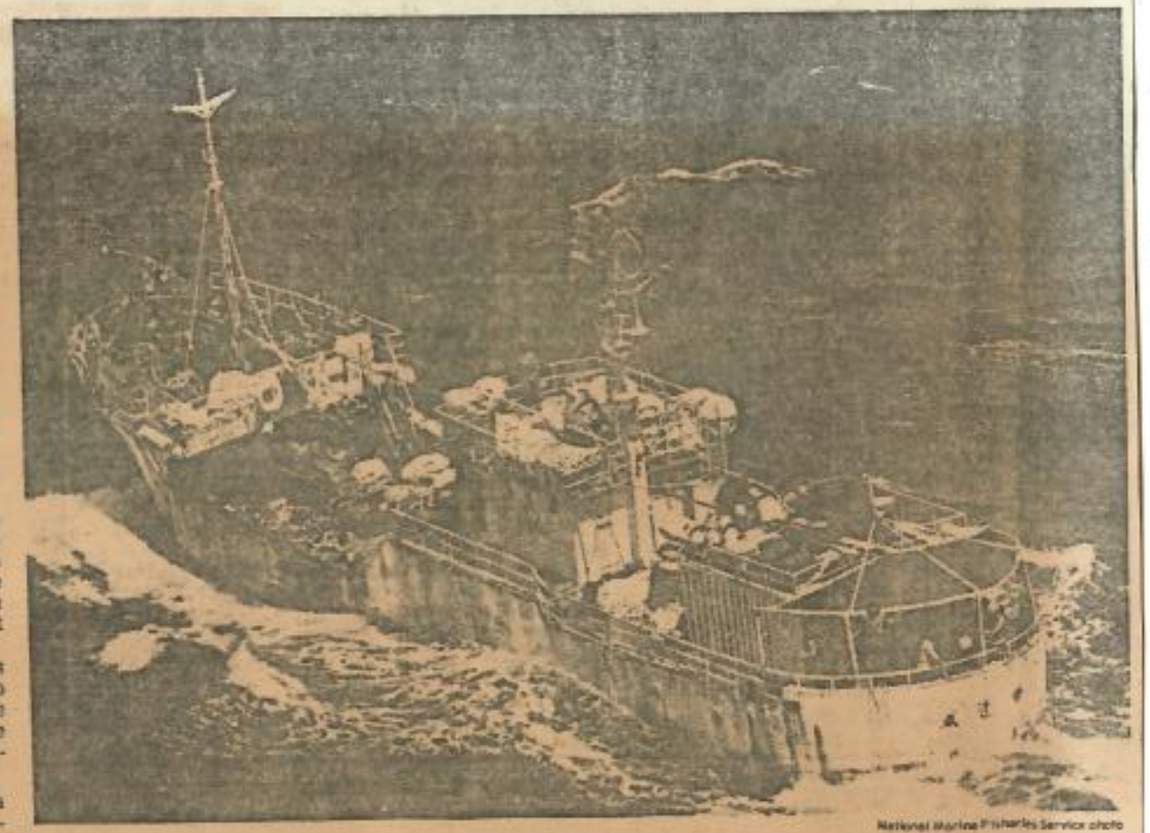
The three boats were spotted Wednesday about 135 miles northwest of the Kure atoll in the Leeward Islands by a Coast Guard C-130 patrol plane.

Scott Anderson, a special agent of the National Marine Fisheries Service who was aboard the plane, said, "We dropped several message blocks onto the boats telling them that they were in the 200-mile zone. They received the messages, but they didn't leave for several hours."

According to Anderson, this is the fourth time foreign boats have been spotted in this area in the past three years. The previous instances, however, all involved Japanese fishing boats. Anderson said that one case has resulted in a fine being instituted, but the other cases are still pending.

"The National Marine Fisheries Service is currently conducting an investigation to ascertain if these Taiwanese vessels had the proper permits to fish within the 200-mile limit, and also investigating charges of illegal coral harvesting," said Streeter.

The maximum fine for fishing without a permit is $20,000, but if the suspected violators refuse to cooperate, the United States has the power to deny some or all future permit applications for that country, according to Streeter.



National Marine Fisheries Service photo

One of the three Taiwanese boats spotted Wednesday in possible violation of the 200-mile U.S.-controlled fishing limit.

...metric of concrete.

Price also said research is being done ...method of removal of

Taiwan fishermen invade U.S. waters

By Mark Matsunaga
Advertiser Staff Writer

Three Taiwanese fishing boats violated U.S. territorial fishing waters yesterday but sailed away under the watchful eye of a Coast Guard C-130 patrol plane, the Coast Guard said.

The boats were apparently harvesting coral from the ocean bottom about 135 miles northwest of Kure Atoll in the Leeward Hawaiian Islands when the C-130, on routine fisheries patrol, spotted them at 11:55 a.m.

The crew of the plane reported that two of the boats had nets over their port sides and were drifting with the currents.

The plane dropped numerous messages to the boats, warning them that they were violating the U.S. 200-mile controlled fishing area. The boats were, in fact, 65 miles into the zone.

The plane even signaled them with a light, a spokesman said, but there was no response from the boats until they finally began sailing west, out of the zone, about two hours later.

The boats were near a point known as Hancock's Sea Mount, apparently a popular haunt. Coast Guard spokesman Keith Spangler said there have been 16 violations of the 200-mile limit by foreign vessels reported in that area in the past three years.

Foreign fishermen are supposed to obtain permits before they enter U.S. waters, but coral is on the prohibited list for catches, so permits for coral fishing wouldn't be given anyway, Spangler said.

Despite the apparent double-violation by the Taiwanese boats yesterday, there is not much that can be done, he said.

U.S. officials will try to contact Taiwanese officials and have the boats ordered to Midway Island for further action, but realistically, there is little chance that they will comply.

Japan to

By David Shapiro
Gannett News Service

WASHINGTON — The Japanese government has agreed to ease its import limits on American fish and join with Japan's fishing industry in other steps to stimulate the sale of U.S.-caught fish in Japan.

The Japanese are hoping that the agreement, which emerged from four months of U.S.-Japan trade negotiations concluded last week, will discourage moves in Congress to restrict Japanese fishermen operating in U.S. waters.

Of particular concern to Japan is a bill proposed in the House by Rep. John Breaux, D-La., to force a phase-out of all foreign fishing within the U.S. 200-mile zone.

Japanese industry leaders criticize the bill as an "overly protectionist" measure that would set arbitrary restrictions on foreign fishing, violate U.S. treaty obligations and waste some 1.8 billion pounds of fish a year.

Alan Macnow, a consultant to the Japanese fishing industry, said the new trade agreement will provide the stimulus for U.S. fishermen sought by the Breaux bill without imposing further restrictions on foreign fishing in U.S. waters.

MACNOW SAID the Breaux restrictions would be pointless, since U.S. fishing interests could not possibly fill the void that would be left by the departure of the Japanese and other foreign fishermen from U.S. waters.

"I think the important point of this trade agreement is that the Japanese are showing a spirit of cooperation," he said. "They are willing to help develop the U.S. fishing industry."

Macnow said Japan is already buying $600 million worth of U.S. fish each year, while Japanese fishermen are harvesting only $250 million worth of fish from U.S. waters.

He said the new trade agreement will result in even more U.S. sales to Japan of "underutilized" fish and shellfish resources, such as pollock, herring, sable fish, snow crab, salmon roe and squid.

Macnow said Japan's import restrictions will be relaxed to allow any Japanese company doing more than $30,000 in business with U.S. firms to buy fish directly from U.S. producers.

This will allow supermarkets and other food outlets in Japan to bypass the middlemen who have in the past driven up the price of U.S. fish to the

Fish Glut in New England

GLOUCESTER, Mass. (AP) — For as long as most of them can remember, New England fishermen had the same complaint: too few fish.

Three years ago, the United States imposed a 200-mile fishing limit and eliminated competition from the Soviets and Europeans whose voracious fleets swept the seas clean.

Now New England fishermen have a new complaint: too many fish.

Prices have crashed during the past few months, and the dream of a profitable rebirth for their ancient industry has been wrecked by the forces of supply and demand.

At 4 a.m. every day, Charles Frontiero and his son and a mate churn out of Gloucester Harbor aboard the old wooden Madrugador. And at 4 p.m., they return with their day's catch of flounder.

At the end of a week, each man took home $188.

"A hundred and eighty-eight dollars," Frontiero repeated with disgust. "A week's pay. What can you do with that?"

FOR HUNDREDS of other fishermen in Gloucester, a city that has lived on fishing for 357 years, the story is the same, and it's the same at other big and little fishing ports along the New England coast.

The United States assumed jurisdiction over all fishing within 200 miles of its shores in 1977. Virtually all foreigners who had dominated these fishing grounds for decades were banned.

For the first time in memory, the crusty, antiquated New England fishing fleet began to grow. Backed by federal loans, shipyards turned out big, gleaming steel ships that cost $1 million or more. The number of fishing boats based in the region increased 30 percent to almost 800. New fishermen joined old fishermen on the seas.

BUT WHILE THE catches of fresh fish have steadily increased, demand has not. So when the recession struck, fish prices abruptly fell. Around February, the price of fish on the docks dropped from about 40 cents a pound to about 10 cents.

"The fish prices go up and down, but mostly down," said Frontiero, who has been fishing for 47 of his 60 years. "We're making a third of what we should be making. There's too damned many boats. That's the cause of all our problems. The more boats there are, the worse it's going to be."

Jeff Tutein, 24, of the Stella G., like most New England fishermen, works for a share of the catch, not an hourly wage.

Until recently, he and his mates were getting 30 cents a pound for whiting, enough to make a decent living.

"But then the price went to eight cents, just like that," he said.

SO THEY WERE outfitting the boat to catch bottom-feeding fish — mostly cod, flounder and haddock. The price of these fish is depressed, too, and in recent weeks they have been scarce.

"You have do do something," he complained. "The ground fish haven't been around either, but you have to try it. You can't stay home."

Nearby, skipper Salvador Albano was getting the Annie Marie ready to sail for Georges Bank.

"We're working for nothing," he lamented. "We stay out eight, 10 days. Then we come back to Gloucester and get 10 cents a pound."

As on all boats, the Annie Marie's mortgage and insurance payments and other expenses must be met before the crew is paid. And the price of diesel fuel, ice and food have risen steadily.

"I don" know what's going on in America," Albano said. "Everything else is up, and the price of fish is down. It's futile."

Last month, 50 scallopers and 130 draggers in New Bedford stopped fishing for a month to protest the low prices. But there was still so much fish available that their catches were not missed. And the low prices never budged.

BECAUSE THE dockside cost of fish is such a small part of the retail price, the cost of fish in markets and restaurants has not dropped correspondingly.

During better times a couple of years ago, fishermen on large trawlers were earning $35,000 a year; the pay for scallopers reached $50,000.

But Joseph Mueller, an economist with the National Marine Fisheries Service, says fishermen's earnings have been declining since 1978. And this year, things have gotten decidedly worse.

Besides the recession, demand for New England's fresh fish is being dampened by competition from imported frozen fish and relatively cheap chicken and pork.

TOO MUCH FISH—Dan Fullham of Wellesley, Mass., sits on front of the 120-foot stern trawler "Old Colony" at the Boston Pier. He and the trawler are idled because of the oversupply of fish. —AP Photo.

Ease Fish Import Restrictions

RELAXED FISH LIMITS — Japan's government has agreed to ease the limits on imported American fish. Pictured here is activity on a tuna boat fishing Hawaiian waters. Star-Bulletin Photo.

point that it is not competitive in Japan, Macnow said.

HE SAID JAPAN will also expand the number of Japanese importers who are allowed to buy herring from U.S. fishermen. In the past, only the Hokkaido Fishermen's Cooperative was authorized to import U.S. herring. The cooperative limited U.S. imports to protect Japanese herring fishermen.

"This is going to help a lot of the West Coast fishermen," Macnow said. "It will broaden the market for their herring. It's going to generate an awful lot of new interest in general among fishermen to fish for these species."

Beyond the government actions, Japanese industry leaders have agreed to take several actions on their own to strengthen the U.S. fishing industry, Macnow said.

He said the Japan Deepsea Trollers Association has offered to enter a joint venture with Alaskan fishermen to produce 500,000 metric tons of pollock a year.

Also, the Japanese will send a trade mission to U.S. coastal regions this fall to determine "what (fish) products are available from the U.S. and which can be successfully marketed in Japan," Macnow said.

Star-Bulletin

The THURSDAY REPORT

Section D

Honolulu July 24, 1980 •

A weekly business feature section

Isle Scientists Get First Captive Aku to Spawn

By Nadine W. Scott
Star-Bulletin Writer

Scientists have made a landmark breakthrough in tuna research at the Kewalo Research Facility where for the first time anywhere in the world skipjack tuna (aku) have been induced to spawn in captivity.

"We're tickled pink," Richard S. Shomura, director of the Honolulu laboratory for the National Marine Fisheries Service, said today.

Shomura explained that the scientific drama began to unfold at 11 p.m. on June 28 when Albert Grace, skipper of the Bluefin, delivered 13 of the aku to the Honolulu laboratory.

Scientists monitoring the fish saw evidence of spawning about 6 the following morning. They found approximately 110,000 "ripe" eggs in the water strainer from the tank where the aku were swimming, he said.

Sexually ripe male and female aku were then taken from the holding tank and stripped of their eggs and sperm.

THE EGGS WERE artificially fertilized by mixing them with the sperm. Thousands of the fertilized eggs were placed in special aquaria for careful observation.

Thomas K. Kazama, the fishery biologist who has overall supervision of the project, said the tiny aku larvae hatched after 30 hours.

He and his team have been successful in keeping the microscopic larvae alive for the past week by feeding them with marine plankton from cultures established for this purpose.

Shomura said the laboratory has been gearing up for the experiments to induce tuna to spawn artificially in captivity for some time.

The problem now will be to keep the larvae alive.

SCIENTISTS IN the past have scooped up what appeared to be skipjack tuna larvae in their nets in the open ocean. But positive identification was not possible until now.

"We've never been quite sure how fast this species grows when it is very young," Shomura said.

Nor have the fisheries scientists been absolutely sure how much food the growing larvae consume.

Under controlled conditions, these are a "a whole bunch" of scientific questions the researchers hope to answer.

They may in the future be able to answer more questions about what pollution does to the growing fish.

"What is the effect of crude oil on pelagic fishes, for instance," he said. (Pelagic means living in the open sea as opposed to coastal or near-shore zones.)

"IT MIGHT BE over a year before these larvae become 20-pound skipjack tuna," Shomura said. A fish of that size can consume as much as 30 percent of its body weight per day. "A 20-pound aku of this kind could eat as much as six pounds of food a day."

"They're very mobile, active animals," he said.

Calvin M. Kaya, a visiting scientist from the faculty of Montana State University in Bozeman, participated in the experiments. He said this successful spawning of aku is another breakthrough in attempts to induce captive tuna to spawn in shoreside tanks.

Last summer another species of tuna, the kawakawa, were encouraged to spawn in captivity through hormone treatments at the Kewalo facility.

The only other instance of a tuna spawning in captivity is that of bluefin tuna which spawn in large netted enclosures in Japan.

Cruise Boats Face

By Lee Cotterell
Star-Bulletin Writer

An unrequited love affair at Kewalo Basin may be headed for the rocks.

Owners of dinner-cruise boats are getting strong messages that they may be forced to leave their nest and never come back. If they go, they will do so with hearts breaking and anchors dragging.

"We would like to live in harmony with the fishing industry people in Kewalo," says Rudy Choy, president of the Hawaii Cruise Boat Owners Association.

But increasing numbers of cruise boats and fishing vessels are lined up at the crowded harbor for dock space, and state officials say the fishermen deserve admission.

"The primary need here is commercial fishing," says James B. McCormack, deputy director of the state Transportation Department.

"Traditionally and historically, Kewalo has been the fishing center," agrees Rep. Charles Toguchi, chairman of the House Ocean and Marine Resources Committee. "In the future, I don't think we're going to have mixed uses of boats in Kewalo Basin."

"If push comes to shove, the fishing boats should have priority," adds John Rovey of the Tuna Boat Owners Cooperative Inc.

After years of sharing between owners of fishing boats and dinner cruises, push is coming to shove in the basin, the core of both industries in Hawaii.

FISHERMEN HAVE BEEN bringing their catch into the basin ever since it was carved out of an ancient, coastline fishery in the 1920s to accommodate the boats. Charter boats that had been moored at Ala Wai Yacht Harbor entered the basin in the late 1950s. Dinner cruises followed, and the conflict began, as the different vessels were integrated throughout the basin.

"It wasn't that sweet and rosy in those days," says McCormack, who entered the scene in 1966 and segregated the boats by use. Cruise and charter boats were assigned spaces on the mauka side of the basin, along Ala Moana. Fishing boats were moored along the basin's diamond head side and inside the narrow, triangular peninsula that partially encloses it.

The segregation brought only a truce, and a fragile one at that. As fleet sizes have increased, tensions have mounted among the competing boatmen vying for space.

Dinner cruises boomed in the early 1970s with the increase in tourism. Initial box lunches offered on spartan cruises gave way to elaborate dinners with drinks and live entertainment.

More than a million tourists last year paid prices ranging from $16 ("booze and pupus") to nearly $30 ("deluxe dinners") for twilight rides on any of 16 boats that drift along Hawaii's coastline.

tical problems, officials foresee eventual success and stability in the Midway fishing grounds. A shortage of harbor space is seen as the chief obstacle to that success — many of the trollers would dock in Hawaii in the off-season — and to other growth in Hawaii's fishing industry.

"MY MAIN CONCERN IS that we get dock facilities somewhere," he says.

Swerdloff's study, called the Hawaii Fisheries Development Plan, proposes that fishing boats based in Honolulu be consolidated in a "seafood industrial park."

Since nearly two-thirds of the state's catch and nearly all of Oahu's share is unloaded at Kewalo Basin, and the basin already is equipped with a cannery, ice plant, fish auction and several fish-processing plants, state officials are eyeing it as the logical site for the fishing boats to nest.

Even if the cruise boats are ejected, the basin might be too small to accommodate all the fishing boats, McCormack concedes, and a revamping of the dock system within the basin would be needed.

"We're going to have to gut that basin," he says. If it still isn't large enough — and there is a good chance it won't be — McCormack says it could be expanded by dredging, moving the triangular peninsula further out to sea. That move would draw immediate fire from some legislators and environmentalists.

"If they go out one inch further, they'll run into the solid opposition of the surfing and fishing industry," says John Kelly of Save Our Surf. Kelly notes that a

NINE OF THOSE BOATS are moored at Kewalo Basin. One is operated out of Hilton Hawaiian Village. The other six are berthed in Honolulu Harbor because there is no room for them at Kewalo Basin, Choy says.

Meanwhile, Hawaii's fishing industry, which had declined in the 1950s and 1960s, experienced a resurgence. Ten new fishing boats were allowed in Kewalo Basin and at Honolulu Harbor's Pier 17 in the early 1970s, and the fishing fleet has continued to grow.

Rovey says fishermen at Kewalo Basin don't like rubbing sterns with tour boats, and 25 to 45 other fishermen are impatiently waiting for berths in the basin. They feel the basin "was primarily put out there for commercial fishing," Rovey says. "They feel a constant encroachment on them by the tour boats.

"There's some people out here who own (fishing) boats who are really ticked off about this," Rovey says. "It's a godawful mess down here."

State officials as recently as last year thought Kewalo Basin could handle the growth simply by rearranging and adding onto its 118 berths.

Since then, however, the desire to allow shared use of the basin "has been superseded by the demands of the commercial fishing industry," McCormack says.

"All of a sudden," Choy says, "the decision was made to remove the tour boats."

THE TURNABOUT WAS PROMPTED by growing optimism about the future of Hawaii's long-stagnant fishing industry, which accounts for less than 1 percent of the state's production of goods and services. More than two-thirds of the seafood consumed in Hawaii is imported. Even the local favorite, mahimahi, comes mostly from Taiwan and Ecuador.

A plan completed late last year for the state Department of Land and Natural Resources called for a quadrupling of the state's fish catch by 1990 and continued, rapid growth to the turn of the century.

The plan's authors, headed by former state marine official Stanley N. Swerdloff, noted recent successes by Hawaii's fishing fleet and pointed toward the largely untapped schools of albacore tuna near Midway Island for much of the growth.

More than four million tons of tuna was caught off Midway, at the southern end of the Hawaii archipelago, in last year's experiment, and Swerdloff says this year's catch from 35 to 40 boats has been "very good."

"Some of the boats are already full and on their way home," he says.

Although last year's experiment was riddled by logis-

TOURISTS OR TUNA?—If legislators and state officials have their way, Kewalo Basin will become a center for the state's growing commercial fishing business, with cruise boats crowded out to find berths elsewhere. But the cruise boat owners say they believe there's enough room at Kewalo Basin for their boats as well as those of the fishermen. — Star-Bulletin Photos by Terry Luke, at left, and Ken Sakamoto, below.

Ouster from Kewalo Basin

nd nearby area called Shark Hole is a popular spot for surfers, who recover their boards near the peninsula's edge.

ALSO, HE SAID, SMALL fish thrive in the shallow water near the peninsula, and moving it further out "will simply take away a portion of the fishery."

"People fish from that pier all the time," Kelly says.

Toguchi says he and other legislators would regard the dredging as "totally unacceptable" for "all the environmental reasons."

McCormack is unperturbed. "If we have to expand outward," he says, "there will always be opposition, but I don't think it will be insurmountable." He says the potential environmental problems could be overcome.

The more immediate concerns are those of the cruise boat owners, who see their livelihood threatened. The mix of fishing boats, cruise boats and nearby restaurants and Ward Warehouse stores "creates a tremendous atmosphere" that draws one of every four tourists in Hawaii, Choy says.

"If we moved out of there," he says, "Kewalo would be a dead spot."

Fisherman's Wharf restaurant derives one-third or more of its business from tourists, says Spencer Weaver of Spencecliff Corp., which acquired the one-time ship's supply store in 1951.

Certain tour groups that are bused to Kewalo Basin from Waikiki arrange to have lunch at Fisherman's Wharf before beginning their cruise, Weaver says, and their busing elsewhere would be "disastrous" for his restaurant.

JOHN DOMINIS, A SEAFOOD restaurant built last year by Sen. D.G. Anderson on the ewa side of the basin, would not be affected by a banishment of cruise boats, Anderson says. He says 98 percent to 99 percent of the restaurant's customers are local. "As a politician," Anderson says he opposes moving the cruise boats out of Kewalo Basin.

McCormack disputes Weaver's claim of reliance upon tourists at Fisherman's Wharf. Tourists arrive by bus only 15 minutes before cruises begin, McCormack says. After the cruises, he says, "The people come right off the boats and get on the buses and go back to Waikiki."

As for the "atmosphere" at Kewalo, McCormack says, "We are, in fact, creating the atmosphere that they are talking about at the foot of the City and County of Honolulu."

McCormack talks of developing a seven- to eight-acre area for cruise boats between Piers 12 and 15 in Honolulu Harbor, between Aloha Tower and River Street.

Choy says cruise boats now operating out of Honolulu Harbor do so at great risk because of their "dangerous mix" with mammoth cargo ships. Cruise boats sometimes are forced to wait at the harbor's entrance when the large ships, which have priority, toot their horns and demand passage, he says.

UNLIKE KEWALO BASIN, where cruise boats depart the harbor for their nightly cruises after fishing boats have been anchored for the evening, Honolulu Harbor is susceptible to ship traffic conflicting with cruises in the early evening, Choy says.

"We disagree absolutely and entirely," McCormack says. The channel into Honolulu Harbor is 500 feet wide, large enough for everybody, he says. "You could drive two battleships out of there side by side."

Choy also fears rising costs created by having to relocate. Cruise boat owners inevitably would be required to pay the cost of creating new docks for their vessels, he says. Also, a Honolulu Harbor location would add more than two miles to round trips taken by buses from Waikiki, and the extra cost would be passed on to tourists.

"Horse puckee," counters fisherman Rovey. But Choy insists, "If you pass along too many of these costs, we can't sell it anymore."

A side issue was created in January when a group of consultants recommended that the Waikiki Aquarium, now cramped in a small building at Kapiolani Park, be rebuilt next to the National Marine Fisheries Service's research center on the triangular peninsula. The consultants concluded the site would be handy for tourists and would offer the desired "ambience."

"THE DEPARTMENT OF Transportation does not feel that Kewalo Basin is where the aquarium ought to be built," McCormack says flatly. "It would take up too much room."

Meanwhile, Gov. George Ariyoshi has named Homer Maxey, manager of Oahu's harbors, to direct a study on Kewalo Basin's future, in time to present to next year's Legislature.

Maxey, who is McCormack's underling, says he will approach the study "with an open mind." But he says a removal of cruise boats from Kewalo Basin "is probably something that's read into it." He says the study team, consisting of about 30 persons, will examine the effects of removal on the cruise boats and probably will recommend a future site for them.

If the cruise boats are banished, it will be done gradually, because they have leases with the state for their spaces in Kewalo Basin, and they don't expire all at once.

"I don't see any need to do it immediately, an everybody-out kind of thing," says Toguchi.

Cruise boat owners will be included in the study team and can be depended upon to offer their solution to the increasing number of fishing boats.

"They should make space for them somewhere else," says Choy.

Star-Bulletin
The THURSDAY REPORT
Honolulu
Thursday, July 3, 1980
Section D
A weekly business feature section

ern Island Report Won't

By Helen Altonn
Star-Bulletin Writer

cials and scientists looking for ution to a bitter state-federal over the ownership and man- ent of Tern Island won't find it study conducted for the U.S. nd Wildlife Service.

fact, the report by the Manta is expected to add fire to the oversy.

is virtually certain that our ssion of impacts will provoke ssion, debate and perhaps even nt disagreement," it says.

e report was completed in June but some concerned parties said still haven't seen it.

distribution apparently has delayed because of a review ss by Fish and Wildlife officials e Mainland and complications h arose from the study group's views with persons involved the issue.

me refused to participate in the view project and others strenu- objected to drafts of their re- ks.

wever, copies of the research ngs, and the interviews recently made available to a reporter in ish and Wildlife office.

lward Shallenberger is president e Manta Corp. His brother, Rob- Shallenberger, was among par- ants in the study, handling the terrestrial ecology. He has since been named supervisory wildlife biologist for refuges and wildlife resources for the Hawaii area of the Fish and Wildlife Service.

TERN ISLAND is located about 500 miles northwest of Oahu in French Frigate Shoals. It is part of the City and County of Honolulu and the National Wildlife Refuge.

The Coast Guard abandoned the Island last July as a navigation station, spurring a state-federal fight over its ownership.

The state wants to use the 21-acre island as a fisheries base — considered a key element in the island fishing industry's expansion — while the U.S. Fish and Wildlife Service wants to protect it as part of the wildlife refuge, using it only for research.

Three Fish and Wildlife employees, their wives and some researchers now live on the island. An automatic weather station is maintained there — the only one between Hawaii and Midway.

The Manta Corp. study, contracted by the Fish and Wildlife Service in March 1979, was believed prompted by discussions on the use of Tern Island between Gov. George Ariyoshi and Secretary of Interior Cecil D. Andrus.

The nature of the talks was revealed in a follow-up letter from Ariyoshi to Andrus asking him "to notify affected federal agencies of the Department of Interior's intention to allow our state the future use of Tern Island as a fishing support station."

THE MANTA CORP. says the argument over the island "isn't a clear-cut case of conservation versus exploitation" — that "the primary differences involve details and magnitude of research and fishery options and the question of agency management."

"The volatile nature of the management controversy was perhaps best reflected in the extent to which draft interview summaries were modified before being returned to Manta Corp.," the report notes.

"Despite our sincere attempt to accurately reflect what was said during the interviews, some of the draft summaries were changed so drastically that they bear little resemblance to the original document."

The corporation said "glaring disagreement on basic issues and interpretation of facts" occurred even among co-workers and agency representatives.

"The discussions made it clear that Tern Island management is an issue of national and even international significance, and the future evaluation of management alternatives must go much further, beyond the confines of this state, for pertinent facts and opinions," the report says.

Collision at Sea

A large bulk carrier headed toward Japan collided with a 60-foot fishing boat 20 miles northwest of Kaena Point and sank it early this morning, the Coast Guard said today.

Neil Wade, the skipper of the fishing boat Sea Fin, suffered a foot injury in the accident. His wife, the only other person on the boat, was not hurt.

The Coast Guard received a call about the accident at 1:40 a.m. and another fishing boat in the area, the Iwa, is en route to Kewalo Basin with the two survivors.

The Coast Guard said the Milross, a 725-footer of 30,000 tons, is of Norwegian registry. The Coast Guard had no details on damages to the Milross.

Solve State-Federal Differences

The report cites various management options for the disputed island and the potential effects.

THEY INCLUDE a research station or a commercial fisheries support station or a combination of the two, operated by the Fish and Wildlife Service, National Marine Fisheries Service, University of Hawaii or another state agency, or with jurisdiction shared by the agencies.

The study team found "overwhelming support" for an interagency management agreement which it said merits further investigation.

Other alternatives mentioned for the island range from turning it completely over to the wildlife service to making it "a window on the refuge" for visitors to view the restricted area's wildlife — the latter suggestion being the most controversial, the report says.

It says adverse impacts associated with the various options will depend upon the number of people accommodated on the Island, the type of activities and incidence of vessel pollution in the area.

Water quality standards could limit the selection of management options, it says.

The study stresses protection of the island's sea-bird population and other wildlife as a critical factor, pointing out that "the indirect impact of a management decision for Tern Island sea-bird populations of the refuge is very real. ...

"ALL THE TERRESTRIAL biologists stressed the sensitivity of the monk seals, particularly during pupping season. ...The presence of any people ... would probably be sufficient to prevent pupping."

While exploring various ideas for the island, the report says any permanent management decisions would be premature at this time because of legal entanglements, arguments over the refuge boundaries, a lack of data and questions on the designation of critical habitat for Hawaiian monk seals and green turtles.

It says "the most reasonable and publicly acceptable course of action" would be for the Fish and Wildlife Service to carry out an interim option for the island "that would not preclude subsequent change in management objectives at a later date.

"In the meantime, cooperative effort between all agencies involved, with the Fish and Wildlife Service as a lead agency, should be directed toward preparation of a comprehensive EIS."

However, the report says completion of the EIS and implementation of a final management plan for the island should be held off until the boundary dispute is settled and decisions are made on the monk seal and green turtle habitat.

THE UNDERLYING question throughout the Manta Corp. study was "the degree to which commercial exploitation of marine resources in the Northern Hawaiian Islands is compatible with wildlife conservation."

But the data needed to answer the question won't be available until completion of a five-year research program in the Leeward Islands by the Fish and Wildlife Service, National Marine Fisheries Service and the state Division of Fish and Game. The tripartite study is now in its third year.

The corporation says in its opinion the state would not be successful in a legal challenge against the Fish and Wildlife Service's jurisdiction over Tern Island.

But it says the state "could be expected to attempt to gain ownership or limited jurisdiction over Tern Island by the political process. It would be clearly within the authority of Congress to accomplish this."

The report also lists numerous state and federal laws and regulations which could have a bearing on Tern Island's management, regardless of who owns it.

Clay dumped from ship did little harm

By MARK MATSUNAGA
Advertiser Military Writer

The dumping of 2,200 tons of clay into the waters off French Frigate Shoals four weeks ago appears to have had little adverse environmental impact, a National Marine Fisheries Service scientist said yesterday.

John Naughton spent a couple of days last week diving with University of Hawaii biologists Richard Grigg and Steve Dollar in the area where the Greek freighter Anangel Liberty ran aground last month.

"This is the first time anybody's been in the water to assess the impact of the dumping," Naughton said. "There was little obvious damage, except for a big hole in the reef where the ship ran aground."

He added that more dives will be made later this year and that laboratory reports are pending on sediment and fish samples he and the others brought back.

He said, however, that "Our assessment was quite accurate. If there was going to be a large amount of impact, we should have seen it this time."

The Anangel Liberty ran aground on a reef at French Frigate Shoals on April 27.

The Coast Guard decided to jettison the clay — kaolin — after initial efforts failed to free the ship.

The biggest concern was that the 540 tons of diesel fuel aboard the ship would spill.

Little was known of the possible effects of kaolin, a light powder, except that it was not classified as a toxic substance.

After a study of currents and tides in the area, the decision was made to jettison up to 3,000 tons of kaolin.

The ship was freed on May 7 after 2,200 tons — in 50-pound paper bags — had been dumped overboard.

Naughton said much of the clay has been dispersed, but a substantial amount still lies on the ocean floor where it was dumped, emitting a plume of the fine particles.

French Frigate Shoals is a refuge for the endangered Hawaiian monk seal and green turtle, and Naughton said there was apprehension about the effect the clay might have on members of those species.

23 MAY 1980 A2

Space Problem for Fishing Boats

Hono. Star-Bulletin

The state Department of Transportation is planning to provide temporary moorings for 20 albacore fishing vessels at Pier 35 to avoid the hassles that occurred last year when the ships arrived with no place to tie up.

Some Mainland vessels were booted out of Kewalo Basin last year by the Harbors Division after participating in a 20-ship Midway albacore fishery project planned and sponsored by the state.

A temporary home was found for the boats at Snug Harbor after they took their case to the media and threatened to shift their fishing operations to Alaska. Then they were moved to Pier 35, used for pineapple operations, where some stayed for the winter.

The three remaining boats—Cape Mala, Archer and Finback—were preparing to leave this week with the beginning of the albacore season, and their operators said they might not be back.

They said they were told to get out of the pier earlier this week, whether they were ready to go fishing or not, because the facilities were needed for pineapple barges.

SHAWN MARTIN, skipper of the Finback, said the families rented homes in Makaha and wanted to make Hawaii a permanent base. "But it's been a long, hard grind this winter. We're tired of fighting. We have to fight for everything."

"Hawaii would be a better place to deliver our fish than Alaska," said Roy Myking, captain of the Cape Mala. "But we've got enough problems taking care of our fish and our boats without worrying about where to tie up."

They said the Northern Leader, a $5 million Mainland albacore vessel, also was forced to leave Pier 35 this week after only a four-day stay because the berthing facilities were needed for pineapple barges.

"WE HAVE the space here to accommodate vessels for voyage repairs," said J.B. McCormick, head of the transportation department's Water Transportation Facilities Division. "We don't close the gates of Honolulu Harbor to these people. But the point is, they can't move in here and say, 'I'm here. Where's my berth?'"

He said the albacore boats were told when they went to Pier 35 that they had to leave at the beginning of the pineapple season.

But he said the pier can be used for 20 albacore boats on a temporary basis because the pineapple and albacore seasons match pretty well. "There may be a three-week overlap when we have to take the boats out of Pier 35 and move them somewhere else until they sail, but we can handle that," he said.

The fishing industry estimates that about nine local boats and 35 from the Mainland will be fishing for albacore off Midway this summer. It's believed that only about 20 will need temporary moorings, McCormick said.

HE SAID his department in July will get $15,000 provided by the last Legislature to increase temporary berthing facilities, and electricity and mooring cleats will be installed for the boats at Pier 35.

But he acknowledged that this won't solve the problem of fishing boats that might want to stay here. "We can't give these people permanent berths over the people in this state who have been waiting for berthings for three or four years," he said.

While trying to accommodate the developing fishing industry, McCormick said, "It's extremely difficult to introduce new industries to harbors that are already occupied. It's a matter of we just don't have any more room, that's all."

However, he said a task force is being organized to plan use of Kewalo Basin as a commercial fisheries port and the department has money to build a new pier, Pier 16, which will be used with Pier 17 for commercial fishing boats.

BY THE TIME the new piers are available they will be inadequate, said Stanley Swerdloff, state fisheries consultant. He said 15 new local fishing boats came in the past year. "We've been saying that commercial fishing would take off, and it has...

"They (harbors officials) keep telling us 'don't worry' but this has been going on for 1½ years," he said. "We're going to continue to have all these problems without dock space."

By moving away from a one-boat-one-pier concept into a "stacking" arrangement, McCormick said he thinks Kewalo's berthing capacity can be increased 35 to 40 percent and 60 to 70 residents on the waiting list for moorings can be placed at the new piers.

"If it's done right, I think we can accommodate this in Kewalo, with fallout in Honolulu Harbor, for $5 million or less, by making better utilization of those things we have," he said.

"It also allows us to live with the growth. I think the commercial fishing industry will grow, without doubt —but how much, and when? We are not going overboard in the face of an unknown future."

Fishermen Want to Sell Fish at Kauai Ports

By Helen Altonn
Star-Bulletin Writer

Commercial fishermen landing at state harbors on Kauai have run into a problem — resulting in their arrest — because they have been selling their catch to the public off their boats, a violation of state Department of Transportation rules.

They are seeking state permission for all licensed Hawaii fishermen to sell their fish to the public at the state's Port Allen and Nawiliwili harbors on Kauai.

Jack Suwa, deputy director of the state Department of Transportation, said the department is aware of the situation and is reviewing the fishermen's "open marketing" proposal for the Kauai ports.

Leo A. Ohai, a commercial fishermen with the Oceanic Libra Corp., outlined the fishermen's plight in a letter to Moses Kealoha, Oahu member of the state Board of Land and Natural Resources.

Ohai said the company's boats are based in Honolulu and fish the entire Hawaiian Island chain, including most of the Leeward Islands.

ON FEB. 18, HE said they caught 15,000 pounds of akule off Kauai "and rather than travel the long distance back to Honolulu, we decided to market our fish on Kauai." He said the fishermen offered the catch to retail markets in Lihue and Kapaa after docking at Port Allen but they could only use 625 pounds.

"Because we had to move the balance of our catch, we decided to use an 'open market' approach and market our fish directly to the public." He said the boat was emptied in less than two days.

"Then the complaints began. Most of them came from one retail market and two sport fishing clubs. Calls were made to the harbormaster on Kauai, the director of the Department of Transportation in Honolulu and the governor's office on Kauai to the effect that we were in violation of harbor rules and demanding an immediate halt."

Ohai said, "We've always believed we had a right as licensed commercial fishermen to dock at any state pier and offload our catch to any buyer."

But he said under an administrative policy of the Transportation Department, the fish may only be sold to retailers from boats docked at state harbors.

"THE PUBLIC IS permitted to come to the dock at any time to watch us unload but they can't buy fish," he said.

"What are we supposed to do with our fish if the retailers won't take it? The state requires that we move our entire catch off state harbor facilities and have no other marketing activity on state property."

Ohai said the fishermen continued to market their catches at Port Allen after Feb. 18 with "limited permission" from the state, but the permit was canceled without their knowledge.

He said the fishermen didn't learn of the cancellation until docking at Port Allen in March in gale weather, with the boat low in the water with ice and fish. "We could neither return to Honolulu safely nor wait until the weather improved to market our fish."

He said they attempted to sell the catch through the markets, which ordered only 420 pounds, leaving more than 30,000 pounds on board.

Thus, he said they were forced to market the fish to the public "with or without permission."

HE SAID THE load was split between the Kaimamala and her sister ship, the Libra, in hopes that the Libra could make it to Honolulu through the gale weather in time for the weekend market.

He said the vessel "barely made the market but the fish suffered damage because of the rough trip.

"State harbor officials in Honolulu were instantly informed," Ohai said, "and we were told to cease and desist (sales to the public).

"We refused and were arrested.

"We prefer marketing all our fish through retailers," he said, "but they take very little fish. At the same time, ironically, there is a tremendous demand for fresh fish from the public."

Ohai said adoption of the fishermen's proposal to allow public fish sales at the Kauai harbors would strengthen Hawaii's sagging fishing industry, benefit the public by providing fresh fish at wholesale prices and "still be fair to all parties concerned."

A-2 Friday, May 3, 1980 HONOLULU ADVERTISER

Freed ship resumes Japan voyage

By MARK MATSUNAGA
Advertiser Staff Writer

Leaving controversy and a lot of unfinished business in its wake, the Anangel Liberty resumed its voyage to Japan yesterday after spending 11 days stuck on a reef near French Frigate Shoals in the Leeward Islands.

The 538-foot Greek freighter was freed Wednesday night after a week-long salvage operation that involved two Navy salvage ships, a Coast Guard cutter, a commercial tugboat and a government pollution response team.

An officer involved in the salvage operation said yesterday preliminary findings indicate that the Anangel Liberty was being sailed by a mechanical steering device when it ran aground shortly before dawn on April 27.

"They ran aground evidently at a fairly good rate of speed," the officer said. Acknowledging that French Frigate Shoals is far from normal shipping lanes, he said it appears that "the crew made a navigational error or the ship was affected by strong currents over the preceding night."

The Anangel Liberty was carrying 19,000 tons of clay — a fine, non-toxic powder called kaolin — from Georgia to Japan when it ran aground about 480 miles northwest of Honolulu.

More than 2,000 tons of the kaolin was unloaded by hand and dumped into the ocean to lighten the freighter enough for it to be pulled free. One Navy officer said the water in the area "looked like a giant milk shake."

Most people involved in the salvage operation said the dumping was done because of the need to free the freighter as soon as possible. There were 500 tons of fuel aboard the Anangel Liberty, and fears that it would be spilled led to the decision to dump the clay.

Removing the fuel from the tanker was ruled out early as being impractical and hazardous, Coast Guard officials said.

The dumping of clay prompted a strong public protest Wednesday by Susumu Ono, chairman of the state Board of Land and Natural Resources.

Coast Guard officials yesterday, however, said officials of the state Fish and Game Division participated in meetings where the decision was made to dump the clay into the ocean and that the state is part of the pollution response team that oversaw the salvage operation.

Ono was unavailable for comment last night.

Meanwhile yesterday, Coast Guard and Navy officers were beginning to add up the costs of the salvage operation.

The Anangel Liberty's owners will eventually have to reimburse the U.S. government for the costs, the officers said. They were reluctant, however, to estimate how much the tab would be.

A Navy officer praised all the people involved in the salvage for doing "a heck of a lot of work" and "a very professional job."

Ship Floated off

By Murry Engle
Star-Bulletin Writer

At 9:15 last night, the Coast Guard succeeded in pulling the Greek-registered freighter Anangel Liberty off a reef at French Frigate Shoal.

The company that owns the ship today agreed to pay all costs incurred in the 11-day salvage operation, which the Coast Guard estimates to be about $300,000. The owners may still face court action for the grounding that led to the dumping of nearly 2,200 tons of the ship's clay cargo into the waters of the Leeward islands, possibly endangering sealife there.

Yesterday, Susumu Ono, director of the state Department of Land and Natural Resources, asked the state attorney general's office to look into the possibility of the state taking legal action against the ship's owners.

The 538-foot merchant ship had been aground on the reef, 500 miles northwest of Honolulu, since April 27.

TWO NAVY SHIPS and a Dillingham tug from Honolulu took part in the final pull last night.

The ships were the USS Beaufort, USS Reclaimer and the tug Mana.

Since last Thursday, crews from the Reclaimer, a Navy salvage ship; the Beaufort; and the Anangel Liberty had manually lifted at least 1,300 tons of the stricken ship's cargo of 19,000 tons of clay.

Every 70 tons removed raised the vessel approximately an inch. Each bag weighed 40 pounds. It had been estimated that at least 3,000 tons would have to be off loaded to lighten the ship sufficiently for it to float.

ONO SAID THE clay may endanger sealife in the National Wildlife Refuge in the waters of the Leeward islands.

"I'm fully aware that one of my men, Kenji Ago, director of our department's Fish and Game division, was part of the regional response team that made the decision to dump the clay," Ono said last night.

"Grounding of this ship is most unfortunate and at this time we are not prepared to afix responsibility, but we do protest, in the strongest terms, the violation of our Island environment and the pollution that the dumping of the cargo has caused."

Before the dumping, there were 19,000 tons of the kaolin (fine, white clay) on the ship, which was headed from Savannah, Ga. to Japan. The clay is used to make glossy printing paper, porcelain and some medicines.

ONO SAID THAT the clay, although non-toxic, was in fine dust form and "once it hits the water, these particles tend to expand and sort of suspend themselves in the water."

"We're afraid that the fish life may be affected. As long as it (the clay) is floating in the water, it will have some effect of clogging gills."

A-2 Honolulu Star-Bulletin Thursday, May 8, 1980

Reef; State Eyes Legal Action

he said.

"The Leeward Islands of Hawaii represent a priceless heritage to our present and future generations and to the conservation fisheries programs that can be very adversely affected by this action.

"We cannot permit the pollution and the possible destruction of a very valuable part of Hawaii to occur without a protest and possible court action.

"There has been some kind of experience with this kind of clay doing damage in at least two other instances, in New Jersey and in the Virgin Islands in the 70s," Ono said.

BOB BAETEN, Coast Guard spokesman, said last night that none of the clay had gone inside the reef, where the National Wildlife Refuge is located.

"We relied on our scientists — and several were involved — who recommended Tuesday after extended weather forecasts, to coordinate dumping with the winds and seas when moving away from the reef," Baeten said.

"From photos taken by National Wildlife and Fisheries, the plume coming off where the cargo was being discharged is heading away from the reef.

"We made sure the paper bags of clay were broken open. If the paper were left on and dissolved, the clay would have stayed on the bottom and had a worse effect that if it were suspended."

THE REGIONAL response team, which decided to dump the clay, makes any decisions concerning hazardous substances in or threatening U.S. waters.

Represented at one meeting Saturday and another on Tuesday, besides the state adjutant general's office, were representatives from the National Oceanic and Atmospheric Administration, National Marine Fisheries Service, the U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, National Weather Service, the Pacific military command and the Port of Honolulu; Chairman Bobby G. Burns of the Marine Safety Division; and a representative of the on-scene Coast Guard commander, Al Utara.

THE TEAM DIDN'T want to offload the 150,000 tons of diesel fuel for several reasons, the Coast Guard's Baeten said:

"It was safe but, had it spilled, it would have floated and been much more polluting than the clay. There were great dangers in the 10- to 12-foot seas of a oil-transfer line parting or a cable keeping the barge in line parting.

"Besides, there was no required double-bottomed barge immediately available in the area."

Had the Anangel Liberty not gotten off the reef last night, its salvagers would have faced complicating factors, Baeten said.

"Each high tide is decreasing in height," he said. "With the high tide at a lower level, we were losing 1½ inches a day. So, we would have had to to unload 2½ tons to get back where started."

A-2 Honolulu Star-Bulletin Tuesday, May 6, 1980

Navy Ship Again Fails to Get Greek Freighter Off Reef

A Navy salvage ship last night made its second unsuccessful try to pull the 538-foot Greek freighter Anagel Liberty off a reef at French Frigate Shoals.

Coast Guard officials said another attempt may be made during tonight's high tide.

The freighter, bound for Japan with a load of clay, has been stuck on a reef near Disappearing Island since April 27.

Before last night's attempt, 800 tons of the clay cargo was dumped into the ocean to lighten the ship. The Coast Guard said it was a choice between the powdered clay or fuel and the clay "is a better choice."

POLLUTION EXPERTS monitoring the freighter to check for possible pollution leaks couldn't be reached to comment on what environmental effects, if any, clay would have on ocean beds.

Another Navy salvage ship from Pearl Harbor was scheduled to arrive at the freighter's side today. Officials said a meeting will be held in Honolulu later today to decide if both salvage ships will attempt to pull the freighter free during tonight's high tide.

A first attempt to free the vessel yesterday also failed.

Freighter pulled protests pollution

Two Navy salvage vessels and a civilian seagoing tug pulled a Greek-registered freighter off a reef near French Frigate Shoals last night after the ship ran aground more than a week ago.

Details were skimpy but Navy and Coast Guard spokesman said the 538-foot Anangel Liberty was finally refloated about 9:15 last night with the aid of Navy salvage ships Reclaimer and Buford and a civilian tug.

Before the ship was pulled free, the state protested yesterday "in the strongest terms" the pollution caused by the dumping of the Anangel Liberty's cargo of finely refined clay into the ocean.

The dumping was to lighten the freighter enough to float it free.

Susumu Ono, chairman of the state Board of Land and Natural Resources, said he has sought an opinion from the attorney general's office on possible court action against the owners of the ship, which ran aground April 27 about 480 miles northwest of Oahu.

Several attempts to free the ship earlier this week failed, and sailors from the freighter and the other four vessels were busy yesterday unloading more clay from the freighter.

A Coast Guard spokesman said that 1,300 tons of kaolin — a fine white powder — had been removed from the freighter by yesterday morning. Plans call for removing up to 3,000 of the 19,000 tons of kaolin aboard the Anangel Liberty.

In a brief statement issued last night, Ono said, "The grounding of this ship is most unfortunate, and at this time we are not prepared to affix responsibility, but we do protest — in the strongest terms — the violation of our island environment and the pollution that the dumping of cargo has caused.

"The Leeward Islands of Hawaii represent a priceless heritage for our present and future generations, and to the conservation and fisheries programs that can be very adversely affected by this action.

off reef; state from cargo

Honolulu Advertiser
★★ Thursday, May 8, 1980 A-3

By MARK MATSUNAGA
Advertiser Staff Writer

"We cannot permit the pollution, and possible destruction, of a very valuable part of Hawaii to occur without a protest, and possible court action," Ono said.

The Coast Guard spokesman said the 538-foot ship was rising one inch off the reef for every 70 tons of clay removed. The clay, in 50-pound bags, is being loaded in cargo nets and then dropped in the ocean.

Robert Pavia, the scientific support coordinator for the salvage operation, said earlier yesterday that ocean currents and tides have dispersed the spilled kaolin away from the reef, into the open ocean to the southwest.

Pavia, part of a federal pollution task force overseeing the operations, said a careful study of water circulation — currents and tides — in the area was made before the kaolin was unloaded into the ocean.

Kaolin is used industrially for printing and making porcelain, and federal officials say it is non-toxic. The Anangel Liberty was carrying the clay from Georgia to Japan.

Pavia, of the National Oceanographic and Atmospheric Administration's office of marine pollution assessment in Colorado, said some of the clay apparently penetrated inside the reef once on an early morning flood tide, but the receding tide later that day flushed the clay out.

He added that 3,000 tons of clay is not a large amount "in relation to the total sediment budget of the reef area and the total amount of water that moves over the reef."

Pavia said, "If the ship is just left on the reef and no one pulls it off, eventually a storm would come along that would be severe enough to break it up and spill all of the clay and the fuel."

The 500 tons of fuel aboard the Anangel Liberty poses a potentially greater environmental threat.

The ship's owners requested the Coast Guard's assistance two days after it ran aground. They will probably have to reimburse the government for costs of the salvage operation.

Ship from Pearl joins effort to free freighter

The Pearl Harbor-based salvage ship Beaufort was expected to join the growing fleet of ships trying to free the grounded freighter Anangel Liberty near French Frigate Shoals yesterday.

The Greek vessel with a crew of 25 ran aground April 27 about 500 miles northwest of Honolulu.

The ship was carrying 19,000 tons of kaolin — a fine, white, non-toxic clay used to make glossy printing paper, porcelain and some medicines — valued at more than $162 million. It was bound from Savannah, Ga., to Japan. It also has 500 tons of fuel aboard.

The ship requested Coast Guard assistance and the cutter Mallow arrived there last week. An anchor line was attached to the freighter's stern to prevent it from turning on the shoals and being buffeted by heavy waves.

The 213-fot Navy salvage ship Reclaimer from Pearl Harbor and the Manna, a commercial tugboat from Honolulu, arrived Saturday.

On Sunday crew members of the Mallow and Reclaimer jettisoned more than 500 tons of clay from the Anangel Liberty.

More clay was removed Monday, but an attempt to free the vessel was again unsuccessful. The Anangel Liberty was reportedly hard aground along 75 percent of its 538-foot length.

Some 900 tons of kaolin, valued at $9 million, had been dumped into the ocean by Monday night to lighten the ship. The clay is packed in paper bags, and some of the bags have broken, but the discharge reportedly has stayed outside the reef.

The area is a national wildlife refuge. The kaolin pollution is considered a lesser evil than pollution from the ship's fuel.

A-10 Wednesday, May 7, 1980 HONOLULU ADVERTISER

A-8 Friday, May 2, 1980 HONOLULU ADVERTISER

Navy sends salvage ship to assist grounded tanker

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There were no injuries among the 25 crew members and no apparent damage to the vessel. But the ship is stuck on a reef within the Hawaiian Island National Wildlife Refuge and any discharge of fuel oil or cargo could damage the protected ecosystem, said a Coast Guard official.

A-14 Honolulu Star-Bulletin Wednesday, April 30, 1980

Hawaii Briefs

Ship Aground

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Biologist Takes On New Job of Watching Over Sea Birds

By Harry Whitten
Star-Bulletin Writer

For three years, from 1969 to 1972, Robert J. Shallenberger lived much of the time on Rabbit (Manana) Island, one of the few human beings who ever stayed for any extended time on that island off the Oahu coast.

He was studying the wedge-tailed shearwater, a sea bird on which he wrote his doctoral thesis for the University of California at Los Angeles. He received his Ph.D. in 1973.

Earlier this month he assumed a position which involves him with the welfare of millions of sea birds in Pacific islands.

The job title is supervisory wildlife biologist for refuges and wildlife resources for the Hawaii area of the U.S. Fish and Wildlife Service. He has the same responsibilities that J. Brent Giezentanner, who was recently transferred to the Mainland, had as refuge manager.

But he also has additional responsibilities involving migratory birds and in giving assistance to the military in management of migratory birds and other wildlife on military installations.

He is responsible for management of U.S. wildlife refuges that include the Northwestern Hawaiian Islands, Baker, Howland, Jarvis and Johnston islands, Rose Atoll in American Samoa, and five wetland refuges in the main Hawaiian Islands, Kakahia on Molokai, Pearl Harbor and James Campbell on Oahu, and Huleia and Hanalei on Kauai.

NATIONAL WILDLIFE REFUGES are also being considered for Kealia Pond on Maui and Opaeula on the Big Island.

Assistance to the military will involve Midway and the Kaneohe Marine Corps Air Station in particular, Shallenberger said, but some other military installations also have good wildlife resources.

When fully staffed, his office will have assistant refuge managers on Oahu and Kauai and a rotational staff of assistant refuge managers for Tern Island, French Frigate Shoals. The office also has an administrative site at Kilauea Point, Kauai.

As objectives, Shallenberger hopes to expand research and habitat development efforts and improve the information and education programs.

Research projects are now being conducted at the refuges and habitat development programs are being conducted especially at Hanalei, Kakahia, and Kii Pond, part of Oahu's Campbell Refuge.

Because refuges in the main Hawaiian Islands are primarily for endangered species, they may not be as compatible as Mainland refuges for extensive public use, Shallenberger says. Even so, he thinks the public use opportunity can be improved, especially for educational purposes.

Research in the Northwestern Hawaiian Islands will be concerned primarily with sea bird resources but will also evaluate potential effects of commercial fishing and other human activities, he says.

His office has one refuge biologist assisting the tripartite study which involves the Fish and Wildlife Service, National Marine Fisheries Service, and the state Division of Fish and Game.

Shallenberger, president of the Hawaii Audubon Society, was the primary author of its small field book, "Hawaii's Birds."

He is originally from Southern California and in the past conducted naturalist cruises to the Gulf of California and Scammons Lagoon, breeding area of the gray whale off Baja California.

Robert Shallenberger

After obtaining his Ph.D. degree he spent two years producing natural history films, slide shows and publications for Ahuimanu Productions, which he founded with Walter J. Arnell.

He then became active in environmental consulting work with state and federal agencies and private industry and in early 1978 became an ecologist in the environmental resources section of the U.S. Army Corps of Engineers.

In late May he will be the scientific leader of a trip to the Galapagos Islands.

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Friday, February 29, 1980 Honolulu Star-Bulletin

Pacific Ocean Serves as Isles' Security Blanket

Hawaii recently had clouds, rain and gusty winds, but it will be a cold day in the Islands when the same type of wind systems bring the snowstorms and blizzards experienced on the Mainland.

The big difference is the surrounding ocean waters that take the frigid bite out of these systems before they reach the Islands, said Saul Price, meteorologist with the National Weather Service.

"The ocean acts as a giant thermostat," Price said.

"The cold fronts are really the leading edge of colder air masses that move down into the Central Pacific and across Hawaii. The cold air comes from the polar seas or in some cases from the coast of Asia. It's very cold indeed, pretty far below freezing."

The cold air moving south is heated by warm Pacific waters until this air may be 50 to 80 degrees warmer than it was when it began its southward journey, Price said.

SUCH AIR MOVING down over Mainland states from snow-covered Canada has no such warming influence and presses its frigid cold all the way down the North American continent, he said.

Although Hawaii is farther south than any point on the Mainland, this more southern position is not nearly as moderating an influence on Island temperatures as the surrounding ocean, Price said.

Cold fronts influence Island weather generally no more than a couple of days, he said.

"This rain we just had was associated with one of those cold fronts," he said.

Wednesday, this cold front was moving rapidly, and the temperature dropped about 12 degrees in a few hours, Price said.

But this cold front left quickly, leaving behind cloudiness and showers, a condition that keeps land from cooling off as efficiently as it would if skies were clear and the air calm, Price explained.

Honolulu temperatures recently dropped to the 50s during the coolest parts of the nights, but temperatures always warmed up substantially after several hours of sunlight, he said.

THIS WINTER HAS been characterized by fewer tradewinds from the east or northeast, where they usually flow about 50 percent of the time during the winter. Trades prevailed only from 5 to 10 percent of the time, Price said.

The third weather condition Hawaii has experienced this winter—in addition to cold fronts from the north and trades from easterly directions—has been an unsually high proportion of winds from the south, southwest or west—kona (southerly) winds, he said.

Moist tradewinds—gathering rain-laden clouds by traveling over about 2,000 miles of ocean—drop heavy rains on windward areas of the Hawaiian Islands.

When tradewinds are scarce, areas such as Hilo and Puna on the Big Island get little rain.

Thursday, Feb. 14, 1980 Honolulu Star-Bulletin

Comments Invited from Groups, Individuals

Plan to Push Fishing in Pacific Aired

By Harry Whitten
Star-Bulletin Writer

A management plan for bottom fish and seamount ground fish in the central and western Pacific were to be discussed today by the Western Pacific Regional Fishery Management Council, which met in the lieutenant governor's conference room.

There is a need to promote growth of the fisheries and still avoid overfishing, according to John C. Marr, the council's executive director.

The fishery resources have present and potential value as sources of protein, for creation of employment, and in affording investment opportunities, he said.

Today's meeting was one of several scheduled to give interested organizations and individuals an opportunity to comment on the need and nature of the proposed draft environmental impact statement and fishery management plan (DEIS/FMP), he said.

The bottom fish include snapper, grouper, jack, squirrel fish and goatfish caught by commercial, recreational and subsistence fishermen.

Seamounts are submarine mountains rising from the sea floor with summits 1,000 to 6,000 feet under water. Seamount fisheries are primarily for armorhead and alfonsin.

The Soviet Union, Japan, Korea and Taiwan have all fished on the seamount resources, most of which are outside of the 200-mile fishery conservation zone.

The catch of bottom fish in Hawaii, including the Northwest Hawaiian Islands, was not quite 800,000 pounds in 1978. Annual catches have been estimated as high as 300,000 pounds in American Samoa and 40,000 pounds in Guam.

Most catches are made relatively close to the centers of population, but it is believed that catches may be increased as effort is directed toward more distant fishing grounds.

According to Hawaii Fisheries Development Plan estimates, the additional yield of bottom fish accessible to Hawaii-based fishermen may be as great as 2.6 million pounds and the available yield of seamount ground fish may be several million pounds.

Fishermen Clamoring for More

Buoys Attracting a Lot of Fish

By Helen Altonn
Star-Bulletin Writer

The state hasn't yet completed installation of 26 fish-attracting devices in waters around all the Islands, and already fishermen are clamoring for more.

"Based on what the fishermen have been telling us, the buoys have been fantastic," said Alvin Katekaru, aquatic biologist in charge of the project at the state Division of Fish and Game.

"The boats are waiting in line to fish the buoys," he said. "They have been telling us, 'How come you don't have more?'"

Katekaru said fishermen have been catching a lot of mahimahi, aku, small ahi, ono — and surprisingly some marlin — around the buoys.

Called fish-aggregating devices, all but four of the buoys have been placed offshore by a chartered vessel starting in April. Three were put in the waters off the Big Island's Hilo area last weekend and the last four will be installed off Kona this weekend.

The Honolulu Laboratory of the National Marine Fisheries Service experimented with six buoys in a 1977 project. It was so successful that the 1979 Legislature gave the state Department of Land and Natural Resources $188,100 to take it over.

THE LAST LEGISLATURE appropriated $150,000 for the Fish and Game Division to maintain the buoys during the next fiscal year and make improvements.

"And we may even put in more buoys," Katekaru said.

A major element of the Hawaiian Fisheries Development Master Plan, the buoys are expected to be a major boost to local fishing with as near to guaranteed catches as possible.

"Fuel costs are on everyone's mind," said Katekaru. "And instead of a hit-or-miss situation, chances are high that the fishermen will be picking up something around the buoys," at least to pay their fuel bills, he said.

Because of the short life of the first batch of buoys — which eventually disappeared — the state retained E.R. Cross, Stanford Oil Co. consultant and expert on ocean buoys, and the Makai Ocean Engineering Co., to refine the buoy design and mooring system.

The new buoys are made of large rubber tires filled with polyurethane foam to make them unbreakable and unsinkable.

The Navy provided anchors for the devices at no cost to the state.

Katekaru said the state has worked closely with the Navy on location of the buoys, which range from 2.5 to 25 miles offshore outside of submarine lanes.

HE SAID THE Big Island will have seven of the floating fish lures; Oahu has 11, Kauai four, and the others are off Maui and Lanai.

The state has prepared fish-buoy information forms to obtain data on catches and fishermen have been very responsive, Katekaru said.

He said he hasn't had a chance yet to evaluate all of the information, but an estimated 21,000 pounds of fish have been taken since April in 13 boat trips at one of the most popular buoys off Kaneohe.

He said aku constituted about 60 percent of the catch and yellowfin tuna about 25 percent. The boats also caught two marlin — one 362 pounds and the other 510 pounds.

Katekaru expressed surprise at the marlin landings, explaining that marlin usually stay about one to two miles away from the Islands. "But we have been getting reports that they're coming a little closer ....

"I'm kind of excited about it," he said.

Fishing activity primarily has been on the windward side of Oahu, off Kaneohe, Laie and Makapuu, he said.

He recently saw an aku boat fishing around the Kaneohe buoy and said, "It was doing pretty well." But he said, "That's just one buoy. Others have been pretty slow."

HE HAD GONE to Kaneohe to replace a navigational light package which had been removed from the buoy.

"I hope we don't have problems like this," he said. Each buoy is worth about $4,500 and all fishermen have been asked to help prevent damage and vandalism to them, Katekaru said.

"We hope they will tell other fishermen that this is a good thing and they shouldn't be doing things like that. It puts a damper on the whole project."

State fisheries biologists will survey the buoys every three months to maintain and monitor them for wear and tear.

Katekaru said the buoys themselves should last a long time, but the moorings may have to be replaced every six to 12 months.

OH BUOY!—Alvin Katekaru and an aggregating device. —Star-Bulletin Photo by Craig Kojima.

10/2/84

George

Sorry for the confusion. The basking ledge is the site when the turtle was seen. We had two "camp sites." One where we slept was on the west side. This was too precarious for us to keep gear & camp stove, food etc. so we ate and stowed gear on a small area above basking ledge. Did see turtle(s) swimming in west cove but not basking. Cheers!

Stewart

Stewart Fifer

Stewart - Please mark & return

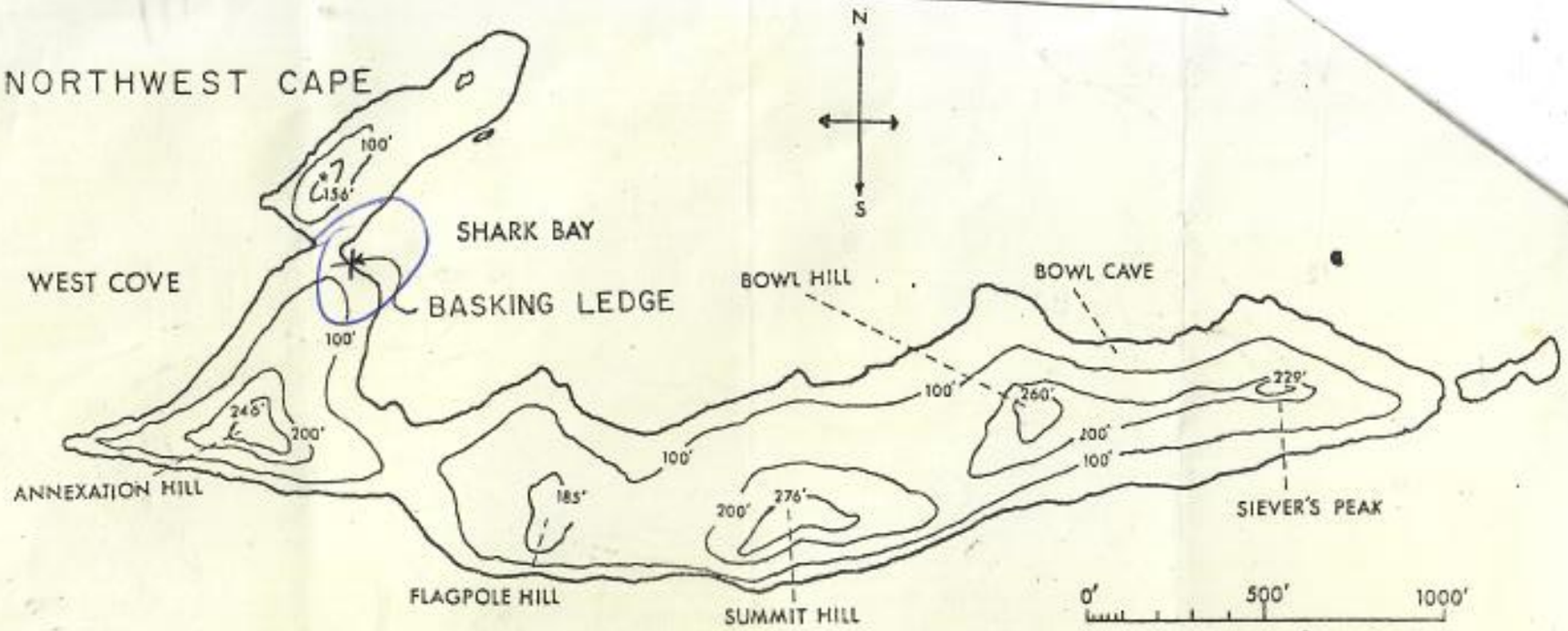

Figure 2. Necker Island (23°35'N, 164°42') has an area of 41 acres and consists of sparsely vegetated volcanic rock. It is located 155 miles from Nihoa and 75 miles from the colonial Hawaiian green turtle breeding site of French Frigate Shoals.

SEP 21 1984

TRIP REPORT - BIOLOGICAL INVESTIGATIONS: NIHOA, NECKER, LAYSAN, LISIANSKI, PEARL AND HERMES REEF, MIDWAY
19 JUNE - 19 JULY, 1984

PERSONNEL: Nihoa and Necker Islands:
Stewart I. Fefer, Sup. Wildl. Biol., FWS, RWR, Honolulu
Robert J. Shallenberger, Complex Refuge Manager, FWS, RWR, Honolulu
Paul Cleghorn, Archeologist, Bishop Museum
Eric Komori, Assistant Archeologist, Bishop Museum

Laysan, Lisianski and Pearl and Hermes Reef:
Stewart Fefer, see above
Ralph Saito, Honolulu District Wildlife Biologist, HawaiiDepartment of Land and Natural Resources, Division of Forestry and Wildlife
Maura Naughton, Ecologist, FWS, RWR, Honolulu
Darcy Hu, Wildlife Biologist, FWS, RWR, Honolulu

Laysan Island:
In addition to above personnel, the following persons were on Laysan to conduct biological studies:
Audrey Newman, Bio. Aide Wildlife, FWS, RWR, Honolulu
Petra Lenz, Univ. of Hawai, Manoa
Alan Kam, National Marine Fisheries Service(NMFS)
Thea Johanos, NMFS

ITINERARY: 19 June - Depart Kewalo via F/V Feresa
21-27 June - Nihoa
28 June - 2 July - Necker
3 - 4 July - Tern I, FFS
6-10 July - Laysan
11-14 July - Lisianski
15 - 17 July - Pearl and Hermes
18-19 July - Midway
19 July - return to Honolulu via MAC

millerbirds. Recent(1977-1979) millerbird estimates by Sincock range from 127 to 490. One banded millerbird was observed near camp, 20-50 feet behind camp(sign), with two red bands on left and one red and one silver band on right.

ruddy turnstone: 8 turnstones observed.

lesser golden plover: 4 observed.

bristle-thighed curlew: one observed.

monk seals: At approximately 1815 on 6/22, 12 seals were noted on the beach on the NW side of Nihoa. No pups or weaners were observed. The twelve seals included 4 adults, 6 subadults and 2 juveniles. There was no evidence of bleach marks or tags from the distant observations. On 6/23, 13 seals were noted on the same beach. A juvenile seal was noted having a head scar. No pregnant females were observed.

Other: A water sample was taken from a seep located along the cliff face below camp. This sample was analyzed by AECOS INC. (sample no. 1084-195 8/6/84) for nitrates plus nitrites, and was found to have extremely high concentrations of these substances (258 mg/l). EPA maximum contaminant level for drinking water for nitrates (as N) is 10mg/l.

NECKER

We arrived at Necker via F/V FERESA at 1400 on 28 June and offloaded from 1500 to 1600. We set up camp on the west side of the islands on a rock ledge. We conducted a survey of surface nesting birds, counting nests, eggs and chicks for each of the following species: red-footed boobies, masked and brown boobies, great frigatebirds and Laysan and black-footed albatross. We used standard codes for phenology.

black-footed albatross: No adults were observed, and most chicks had fledged by this date. Thirty-five nearly fledged young were seen; most of these had wisps of down remaining on the head and neck. Birds were found on the entire island except the NW cape. However, they were not abundant.

Laysan albatross: Laysan albatross were patchily distributed and clumped in certain areas. They were found on flats and hill slopes. A few adults were in the colony feeding their young during the day; none were seen that were not attending young. Considerable chick mortality was evident. We banded 151 local birds on 1 July. Many birds had probably fledged by this time. Habitat is not limiting on Necker Island for this species.

Bulwers petrel: Population is much smaller than that on Nihoa, although there are abundant nests in rock pile habitat types. Perhaps competition with wedge-tailed shearwaters for nest sites occurs on Necker. Several hundred (250-500) nests of this species were present.

wedge-tailed shearwater: Very common breeder. All nests observed contained eggs. Many birds nested in atypical habitat including rock ledges, depressions and some exposed areas, and were very skittish because of this exposure. Many nested on the surface under Chenopodium or Sesbania bushes which often had booby or frigatebird nests in them. A very crude estimate (guesstimate) of the wedge-tailed shearwater nesting population is 5000 pairs.

Christmas shearwater: None were seen or heard during our visit. Dr. Sheila Conant had visited Necker a week earlier via the Townsend Cromwell as part of the NMFS monk seal survey team. She noted one Christmas shearwater nest on Necker at that time.

sooty storm petrel: None were seen or heard.

red-tailed tropicbird: This species is distributed throughout the island but is not common. It nests under rocks, on rock ledges, under overhangs--anywhere with shade. Birds were on eggs and chicks up to half-grown. Birds were observed in aerial displays. An estimated 100-150 pairs(nests) were on the island at this time.

masked booby: Direct count of chicks indicated that 88 were present. Most were stage 6A and older, some flying. No nests with eggs were observed. Most birds were on the ridge line and upper north slope of the island. This species was very common in and around marae sites on Summit, Flagpole and Annexation Hills. Often one adult was in accompaniment of several chicks. Birds were off nests and were more clumped than actual nest sites. Three adults were already banded, but we were unable to catch them. Probably 150 pairs were present on Necker.

brown booby: Only 7 chicks were counted during a direct count of nests; all were at least half grown. This species was widely distributed over the island. Few flying immature birds were seen. Nests and chicks were found on rock ledges near the top of slopes.

red-footed booby: This species is the most abundant booby nesting on Necker. It is a common breeder found throughout the island with largest numbers on the west side of the Summit and Flagpole Hills. Birds are distributed patchily and are found where Chenopodium and Sesbania stands occur. Birds nest in shrubs (no ground nests observed), though many of the nest shrubs were dead or nearly so. Banded birds were not seen, although this species was skittish unless defending a pipping egg or young chick. An island nest count yielded 187 nests. Most chicks were stage 5 (51), 6A (48) and 6B (24).

great frigatebirds: This species is a common breeder over most of the island, particularly on north and west facing slopes and Flagpole Hill. Frigatebird nests are tied to the distribution of vegetation for nest sites. Nests were constructed of large sticks. Groups of 10-15 nests were clumped in areas of suitable

habitat. A total of 534 active nests were observed in most stages from eggs to large chicks. Few flying immatures were noted. Most birds were stage D (126), C (106), B (58), E (67) and A2 (56).

sooty terns: This species was not censused. Very dense colonies were observed in localized areas, but some nesting occurred throughout the island on the slopes and on top. Many flying chicks were noted, as were numerous birds on eggs. There appear to be two nesting phases, as few chicks of in-between stages were observed.

gray-backed tern: This species was observed on eggs and young; fledged birds were also noted. No population estimate was made.

blue-gray noddy: No nesting was observed. Many "pairs" were seen in flight or perching atop outcrops. Birds vocalize when disturbed by humans. This species was most common on vertical rock cliffs on the west end of the island.

brown noddy: Very common nesting bird on Necker Island. Nests contained eggs and some large chicks. Birds were most common on west tip of Annexation Hill. No population estimate was made.

black noddy: Locally common on the northwestern cape and some seen in flight. Less than 200 birds were observed. Most nests had small chicks, but fledged birds were also seen.

white tern: Eggs and small chicks were observed on western ledges and caves. Nesting commonly occurred in small groups of 4-5 pairs. Some pairs were staking out nest sites. No population estimate was made.

ruddy turnstone: Groups of 1-4 turnstones were seen at various locations on the rocky shoreline and at high elevations in seabird colonies. Turnstones are responsible for some egg predation on Necker Island.

golden plover: Three different sightings of one individual were made.

wandering tattler: One observed in tidepools.

mockingbird: One bird seen flying out of overhanging ledge in depression between Flagpole and Annexation Hills. It was pecking a bird carcass on the ledge. Observed on ground and in flight at 1300 on 30 June; no photo taken.

white-tailed tropicbird: One observed at-sea 20 mile SE of Necker at about noon.

green sea turtle: Observed between 3-6 turtles on the tidal ledge below the camp site in the mornings. Usually left by 0900. Observed in the water in West Cove and Shark Bay. Carapace lengths were at least 36" (92 cm); no tags were noted with binoculars. Turtles were not approached closely because of

proximity to seals.

Hawaiian monk seal: Always at least 3-4 seals on tidal flats below camp. Observed hauled out at three other locations (W side of camp area, NW cape intertidal area and rocky intertidal area below Summit Hill).

Numbers at camp flat were as high as 10 at one time. A total of 19 were observed on the island. A high frequency of females had back scarring. No extensive field survey of seals was conducted as NMFS ecologist Morrow was on Necker the previous week.
One mother-pup pair was present on the tidal flat throughout our visit. On 2 July, we observed a newborn pup and mother seal on the camp tidal flat. At 0600 afterbirth was still under the female and the water was bloodied. Presumably, the pup was born overnight.

Later that morning, the newborn pup was seen in a 1 meter deep, vertically walled tidepool unable to climb out. The pup did not have sufficient room or strength to pull itself out. It struggled for at least 15 minutes. As time went on, the pup lost strength, bellowed and began submerging more frequently. We took action to save the pup: the mother was separated from the pup and the pup was pulled from the pool. Tge female quickly rejoined the pup as we departed.

Two small 'no trespassing' signs were put up on West Bay. No wooden sign is on Necker, although foundations of the old wooden one were still present.

Bombs were observed on NW Cape and ammunition on rock faces. Archeological sites may have been destroyed by ordinance in the past.

Archeologists successfully completed field surveys on Necker.

FRENCH FRIGATE SHOALS

We arrived at French Frigate Shoals (FFS) aboard the F/V FERESA on 3 July. Shallenberger, Cleghorn and Komari departed to Honolulu via Hawaiian Sky Tour. Biologists Hu, Saito and Lenz joined Fefer aboard F/V FERESA which departed FFS for Laysan Island on 4 July.

LAYSAN ISLAND

We arrived at Laysan Island on 6 July, offloaded by 0900 and had camp set up by noon. In early a.m., a large marlin swam by the F/V FERESA as it lay anchored off the west shore of Laysan. The following surveys were conducted during the visit:

migratory bird count of Laysan lagoon and South Rock Ledges
Laysan finch transect survey
Laysan duck lagoon count
albatross diagnostics