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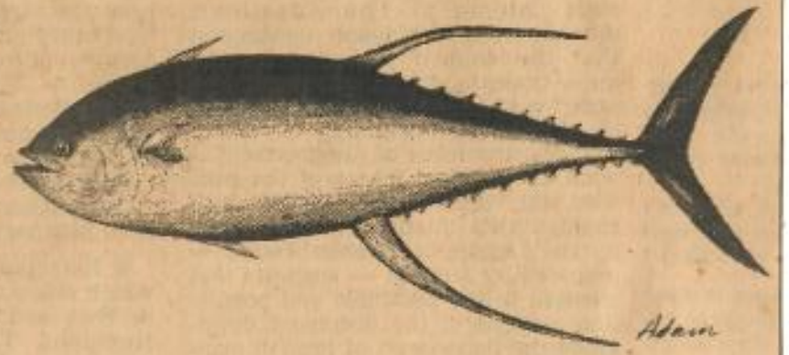
G.H. BALAZS
FILE

Fishermen pale at burnt tuna

from the sea
mike markrich



Burnt tuna means red meat turned pale. It means lower prices and, to an ahi fisherman making his living on the sashimi market, it can mean disaster.

It refers to a chemical change that largely affects fish taken by the ikeshibe or night hand-line fishing. The ikeshibe fish are separated from the other fish at the auction and sliced open so that buyers can look for burn. The buyers look for the white spots in the red meat and determine how much the fish can be sold for.

Nobody really understands why some fish burn and others do not. But scientists and fishermen think that much of it has to do with the change in the rate of metabolism that takes place when a fish is captured.

Alika Cooper, a Big Island keshibe fisherman, explains: "When long-line fishermen catch ahi, the fish swim in slow circles and drown. There's very little burning. But in ikeshibe hand-line fishing there's a lot of stress and the fish gets very hot so it's more of a problem."

Cooper has observed that more burnt fish are taken at the beginning of the season (April to September) than at the end and that egg-bearing females of more than 150 pounds are more likely to have burn than non-egg-bearers.

He does not believe that there is any way to prevent it. But he would like a way to detect it before fish are shipped to market. Cooper and other hand-line fishermen are concerned because short of slicing the fish open (which lowers its value) there is no way to know if it's burnt.

The Hawaii County Council is currently funding a study by Dr. Robert Nakamura of the University of Hawaii.

Nakamura said the problem "is costing the state a lot of money in lost revenue. If you're a fisherman and you have fish and L.A. is willing to buy your 20 150-pound ahis at $4 a pound, well, we're talking a lot of money. Now if we take fish and ship them and some of them have burn, it all goes down the drain. And on top of that you still have to pay the cost of transportation."

Nakamura is currently conducting tests involving fish tissues, looking for a rapid, cheap and accurate method of testing or what one lab assistant calls a "burnt tuna meter." But Nakamura thinks that without sufficient funding it will be more difficult to solve the problem.

In the meantime, he and other scientists encourage fishermen to take proper care of their catch. The fish should be killed and bled as soon as they are caught. Japanese fishermen kill tuna by shoving a long, pointed rod known as a taniguchi tool into the head and down the spinal column of the fish. Many local fishermen find this too time-consuming and prefer baseball bats or even guns to kill the ahi.

Cooper bleeds the fish by making cuts inside the gill plate, alongside the tail and by slicing open the stomach. He usually takes along 600 pounds of ice and ices the fish heavily as soon as they are caught. He doesn't add salt to the water as he says the meat absorbs the salt and lowers its value.

The problem, says Cooper, is statewide. Cooper is hopeful that the scientists at the UH will get more money for research.

"Yesterday, the going price at the auction was $3.85 and we had to sell 25 percent at $1.80 (because of the burn). Sometimes we get less than 80 cents a pound," Cooper says.

If you get an ahi with a lot of burn, don't give up hope. Try this:

Burnt Tuna Recipe

2½ tsp. sesame seeds
1 tsp. shoyu
¾ cup miso
2 tbs. sugar
¼ tsp. white wine
1 lb. ahi 1-inch-thick steaks

Lightly toast the sesame seeds in a pan until crisp. Remove from the pan and crush well. Add miso and other ingredients; mix into paste. Spread the paste over both sides of the ahi steaks and let stand for 30 to 60 minutes. Broil or barbecue until the meat just starts to flake apart with a fork.

The legal spear gun is weapon of mankind, the top predator

from the sea

mike markrich

There are many ocean species that kill to live. The shark and the ulua are among the best known of these in Hawaiian waters. But there can be little question as to who the top predators are. They are people with spears and aqualungs and if they are proficient they can take nearly everything in their path.

The spears that they use are very different than the long pointed shaft used by early Hawaiian fishermen. In those days, a spearer would swim into a school of fish and poke what he needed.

Rubber transformed the simple spear into a projectile and the Hawaiian sling was born. Strips of tire rubber were attached to either side of a brass or bamboo tube. A 6- to 8-foot spear with a notch in its end was inserted and the spearman, with one hand holding the tube and the other pulling the spear tight, would fire the spear like an arrow toward his target.

A clamp was added later that held the stretched rubber tight so that the diver could have one arm free to steady himself when he fired. This developed into a hinge trigger mechanism so that the diver could fire at will.

Today's spear weapons are based on the same principle. The arbelete is a spear gun developed in Italy and used in varied versions throughout the world. It looks something like an underwater rifle and usually is fired while the diver is swimming in a prone position toward his target.

As Keith Turner of Steve's Dive Shop explained: "The key to firing a spear gun is to aim slightly above your target because you know the spear is going to start dropping after it leaves the gun. You have to compensate so that you can hit your fish."

Many people here prefer the three-prong or pole spear. It is a 6- to 8-foot metal shaft with surgical hose at one end and three sharp steel prongs at the other.

"I don't appreciate it," Nakasu said. "It's like people who catch halalu and throw it on the shore. It's a useless waste of life."

Nakasu, station manager at the Hawaii Kai post office, spends his weekends spearfishing. He says that he does it, like many others, just to pay for the cost of his boat and equipment.

After many years of diving off Oahu, Nakasu knows where the fish holes are. He takes a bearing from landmarks, checks his depth gauge and then, aware that he might be watched by other dive boats anxious to know where the fish are, he passes the spot before he releases his "scout" diver into the water. The scout trails a floater and when he locates the fish, signals Nakasu, who then picks him up. Then the divers go down and take the fish that will bring the highest market value, usually mempache or kumu.

Diving is a great source of personal pleasure to Nakasu but he is aware of the risks involved and has lost friends in diving accidents.

Says Nakasu, "A lot of the guys who dive think that the rules don't apply to them. They say the haoles don't know what they're talking about. They dive for years and nothing happens. Then one day they get the bends."

Accidents happen, says Nakasu, due to "greed." He says, "It's the old saying, one more won't hurt. It's stupid dedication and pride. You won't give up that fish, but the truth is that there's always tomorrow. Because if you get the bends it's irreversible."

For many years, commercial spearfishing was illegal in Hawaii. But a recent change in the law initiated by Sen. Duke Kawasaki lifted the prohibition until Dec. 31, 1983, for all species except crustaceans, turtles and marine mammals. Speared fish represents less than 1 percent of all fish taken in Hawaiian waters but a larger percentage of certain species such as kumu and mempache.

Although some fish dealers consider speared fish to be both the least important and least desired of all, they concede that in times of shortage, speared fish can be an important source of fish.

It is estimated that the value of speared fish in Hawaii is about $80,000 per year. As Kawasaki explained, "I supported this because I knew that divers were doing it anyway. How else are they (non-divers) going to get kumu?" Kawasaki was an avid diver and spear-fisherman in his youth and remembers days when he would spear aholehole and "trade three for a haircut on Kekaulike Street."

He remembers when the reef off Ala Moana was "black with fish" and, while he will support an extension of the law that will permit the spearing and sale of of fish after 1983, he also will support periods of reef quarantine and bag limits as well.

Says Kawasaki, "I went looking for fish the other day in the channel off Ala Moana and I was shocked at the depletion. I don't see the fish I saw as a kid. I feel for the 10- or 11-year-olds who used to be able to go diving and get this kind of experience. It was all part of growing up. Nowadays, all they can get is oama. It's something that really makes me sad."

Advertiser photo

An old-timer comes out of the ocean with some fish on his spear guns.

Roger Nakasu, a 17-year veteran commercial spear fisherman explained, "I can take three fish in the time it takes a guy with an arbelete to cock and fire. With a three-prong, it's also harder to shoot your partner."

The spears may be custom made. Some prefer steel to aluminum. The prongs, known as paralyzer points, are No. 6 and No. 7 spring steel and designed to expand into a triangular shape on impact.

The spear fisherman will not arm his spear until he is near his target. It is too tiring to hold the stretched surgical hose for any length of time, so that when he comes into range (usually 3 to 6 feet) he cocks the spear in a swift two-handed motion that rotates the shaft slightly inward. The result is a stretched hose with a slight twist that provides the torque to thrust the spear forward in a straight line.

Nakasu explains that a good spearman will "draw a horizontal line one inch from the eye of the fish and aim for the center. That's the most vulnerable spot of the fish. You try and break the gill plate and if you can go for the brain, that's the best shot."

Turner says that the most basic spearfishing technique is "moving with a motion that is not threatening to the animal. Because when you put that weapon in your hand and the adrenaline starts pumping, the fish are very sensitive to it."

Spear fishermen use different techniques to stalk and attract fish. Sometimes a diver will try to approach a fish from below or reach down for a fistful of sand and throw it around. The fish will come to see the cause of the disturbance.

As Turner explains, "It's a crazy thing. Even after you spear one, the others will come out just to look around."

Nakasu uses bait to attract fish. "A lot of times you've got to have the bait. The ulua for example. They hang around the weke so that you hold the weke and the ulua comes around and gets braver and braver until you let him eat it. Then when he's within range, you 'crack' him and try and break the spine," Nakasu says.

Although some divers consider spearfishing with an aqualung unsportsmanlike and accuse professional spearers of stripping the reefs of fish, Nakasu says, "I'm not a sportsman; I'm a provider. I hunt and I fish and I kill for food."

Nakasu acknowledged that there are those who kill for the sake of killing and some who use chemicals to force fish out of holes.

Oama fishing takes special skill

from the sea

mike markrich

It is the end of summer and hundreds of local families have left their homes to stand for hours with tiny poles in waist-deep water. The oama are running and to catch them takes time, patience and skill.

The oama are baby weke of the species *Mulloid ichthys*. They have come into shallow waters to feed and when they are large enough, they will head back to sea.

Oama fishing does take technique. The fish are small and tend to swallow bait rather than bite it so there is no strong pull on the line that you get with other kinds of fishing.

Slender bamboo rods no more than four feet long are used with two- to three-pound test line, split shot weights and tiny No. 16 hooks.

Oama fishing takes place all over Oahu. You see groups of folks standing in near perfect lines in the water. Among the most popular beaches are Waimanalo, Hauula, Hawaii Kai, sections of Ala Moana and Kahala.

People stand motionless near the center of a school of oama, bait their hooks with shrimp or oama and drop their line to the shallow bottom.

catch offenders. Matsuzaki says, "These guys make their catches, then they throw the nets in the back of the car and they're gone." Matsuzaki urged people with complaints to call the Enforcement Division at 548-5918.

But Matsuzaki's division also gets a lot of praise from people who fish.

Among them is Walter Lee of Alewa Heights. "I fish at Shriners in Waimanalo and I know how difficult it is for the Fish and Game guys. They don't carry poles so that when they come down to the shore, everybody knows who they are. It's mainly the residents who do the illegal stuff and they do it when the Fish and Game guys are gone. It would be pretty tough for them to watch it all the time."

Ernest Steiner, a longtime fisherman and Waimanalo resident, thinks the problem is more complex.

"I can tell you that oama would be a heck of a lot more plentiful if there was a season for adult weke," Steiner says.

His point was that the more adult weke that are taken, the less oama there will be.

Says Steiner, "It's OK if people use a hook and line. The oama usually bite best when the current changes. But they don't bite all the time and they stop biting when the school becomes too few." Steiner believes there are just too many people fishing now.

No one is certain how the increasing numbers of recreational fishers affect the oama.

Paul Kawamoto of the Division of Aquatic Resources says it is not possible to tell the condition of the oama stocks. "These things are cyclical like they are with halalu and akule. There were several years of declining population and then large catches were made in subsequent years."

Chun remains unconvinced. "This is something that guys look forward to every year and it's getting less and less. One year it's going to be gone."

Advertiser photo

At Kailua Beach Park, folks grab their bamboo poles and try their hand at catching oama.

THE NEW YORK TIMES, SEPTEMBER 1, 1982

How Much Can the Ecosystem Take?

To the Editor:

Prof. Lucian Platt ("Environmental Catastrophes Are a Way of Life," letter Aug. 26) misses a vital point in the endangered-species issue: If the

David Suter

rate of the species loss exceeds the genetic capacity of surviving species to evolve into new forms, biotic impoverishment ensues.

No one knows the minimal degree of planetary biotic diversity necessary to maintain the world ecosystem; all we know is that the ecosystem must continue to function if we are to exist.

Thomas Lovejoy and others worry that the speed and intensity of human endeavor unwittingly overwhelm the genetic mechanisms of a swelling roster of species with pressures they have no preparatory evolutionary history to meet. In the absence of some rationally determined minimum diversity level, it seems unwise to accelerate species extinctions uncritically. The evolution and dispersal of the lichens, grasses and herbivores referred to by Professor Platt took millions of years; mechanically clear-cutting tropical rainforest or interrupting river flow with a power dam is instantaneous trauma in biological terms. Weeds and vermin may thrive on such rapid change, but most species appear unable to.

Hence, today's concern about accelerating species extinctions is not an appeal to arrest change but rather to keep it within limits of evolutionary capability.

HOWARD S. IRWIN
Huntington, L.I., Aug. 26, 1982

The writer is former president of the New York Botanical Garden.

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To the Editor:

With all due respect, I would like to correct a few problems in Prof. Lucian Platt's effort to connect the extinction of the snail darter with catastrophe theory and the succession of species.

First, it is a gross misconstruction of the facts to equate gradual, environmentally caused extinction with the deliberate and conscious (one is tempted to add "premeditated") obliteration of a species. Presumably, early leaf-eaters possessed no awareness of their effect on the environment; one hopes that a more intelligent species, endowed with a greater capacity to do good or harm, would devote careful attention to the matter.

Far more important than the snail darter, though, is the issue of precedent-setting. If we allow the eradication of an innocuous species, it will not be long before attempts are made to "deplete" populations of animals (wolves and coyotes, for instance) harmful to human interests but nonetheless crucial to the ecological balance. At what point can control be prevented from devolving into endangerment, given the precedent of previous extinctions?

Starlings and pigeons may have adapted more capably than hummingbirds to the rigors of survival, but I for one prefer the hummingbird.

MARK W. ECKENWILER
Cambridge, Mass., Aug. 26, 1982

THE NEW YORK TIMES, WEDNESDAY, AUGUST 18, 1982

Deputy Chief Asks Wildlife Refuges to Expand Their Economic Uses

By JANE PERLEZ
Special to The New York Times

WASHINGTON, Aug. 17 — The deputy director of the Fish and Wildlife Service has instructed managers of the nation's wildlife refuges to find ways to increase economic development on the reserves, ranging from timber cutting to hydroelectric generation.

The 410 refuges throughout the nation, covering 89 million acres, including about 50,000 acres in New York State, Connecticut and New Jersey, could face severe changes if suggestions outlined in a memorandum by F. Eugene Hester were carried out, according to conservationists.

Mr. Hester said in the memorandum, dated July 27: "We believe that there is potential to expand economic uses in such areas as grazing, haying, farming, timber harvest, trapping, oil and gas extraction, small hydroelectric generation, concessions, commercial hunting and fishing guides, guided interpretive tours and commercial fishing."

Mr. Hester, a career civil servant who was promoted to deputy director of the Fish and Wildlife Service last year, asked the managers of the refuges to list their suggestions by Aug. 20. He said that a similar memorandum last year elicited an unsatisfactory response.

Examples and Suggestions

Asked if there would be any retribution from managers who did not reply with what he felt was an adequate response this time, Mr. Hester said, "No. It's a matter of getting some examples and some suggestions."

Mr. Hester said that the memorandum complied with the philosophy of Interior Secretary James G. Watt's "that there be greater public use of public lands." He said that the projects recommended would need "to be compatible" with the purposes for which the land for the refuges was acquired.

"Even hydroelectric plants could be installed without detriment to the wildlife," Mr. Hester said.

He added that the policy for greater economic development and public use was generated by a desire to "open the refuges up to the public" rather "than more money."

But Mr. Hester cited sightseeing tours organized by a private concessionaire at the Chincoteague National Wildlife Refuge in Virginia as an example of allowing greater public use of the refuge while at the same time "saving the service money and manpower."

Environmentalists' Opposition

The chairman of the wildlife program at the Environmental Defense Fund, Michael Bean, said that the push for economic development on the refuges was "part of a general effort since this Administration took office to open up wildlife refuges in ways that are inimical to their purposes."

The refuges, which were first established in 1903 and greatly expanded in the 1930's, are tracts of land set aside to promote wildlife and wildlife habitats.

Ruffin Harris, a director of the Defenders of Wildlife, said he believed economic development was "clearly contrary to the laws establishing the wildlife refuges."

A spokesman for the Fish and Wildlife Service, Alan Levitt, dismissed the complaints of the conservationists, saying that there was already drilling for oil on refuges in Texas and Louisiana.

An attachment to Mr. Hester's memorandum said: "The demand for local production of electricity through windpowered and hydroelectric generators is increasing. We believe that the refuge system has sites offering potential for the location of both types of electricity generating devices."

For trapping, there are currently 1,039 permit holders who brought in 146,259 fur pelts at 86 field stations, the memorandum said. Timber harvesting by permit holders brought in almost 16 million board feet from 64,800 acres, according to Mr. Hester.

James Gillett, chief of refuge management for the Fish and Wildlife Service, said today that hydroelectric plants would be possible in refuges, particularly in the Northeast, where dams had been constructed to create pools of water for the wildlife.

The oama come for the bait, swallow it and slip easily off the hook.

The experienced oama fisherman leads his bait forward in a slow semi-circular motion. Then when he thinks the oama is on the line, he tugs quickly upward, snagging the hook into the oama's mouth.

Says Hawaii Kai fisherman Alexander Chun, "Pole fishing for oama is mainly timing. You hardly feel anything when they swallow the bait, but most times you know when they're on there. Then you have to pull them up real fast. If you're too slow, you'll lose them."

The tiny oama is a once-a-year treat — usually fried or pickled, often bones and all. But people give other reasons for fishing for oama.

Chun says, "It's the best bait there is." He aerates his bucket to keep them alive and uses the oama as bait later.

"You can use them to catch papio, oio, awa awa, almost any fish," Chun says.

There are other aspects of oama fishing as well. For many families on Oahu, the oama run is a chance to spend a few hours together doing something they enjoy.

Dwight Kondo of Kaneohe says, "When you grow up here the big thing is to catch fish. Well, when the oama run, everybody catches something. It's a kind of thrill to catch one fish after another."

One woman who has fished for oama for five years says that she doesn't even eat them. "I give them away," she said. "I come for the peace and quiet and to relax."

The oama schools begin to appear during the second week of August and continue through September, but fishers worry that the length of the run gets shorter every year.

The problem, according to Chun and others, is that the state is not able to effectively enforce fishing regulations that would protect oama.

The state Division of Aquatic Resources — commonly called Fish and Game — limits the number of oama taken with hook and line to 50 per person per day and prohibits net-throwing for oama.

Chun does not think the regulations go far enough.

"The problem is people are greedy. They take more than 50 a day and they come down with nets. I know of one guy who took 400 pounds in one day. He wiped out the whole school!"

"What I want to know is, where is Fish and Game when all this goes on. If they're gonna have laws, they ought to make them stick."

Conservation and Resource Enforcement Chief Maurice Matsuzaki said his division is "aware of the problem," although they don't keep statistical records of citations by species.

He acknowledged that it is difficult to

The Flying Dutchman

(continued from page 1)

natural that he began his flight career while attending college, picking up extra money as a glider instructor for Calistoga Soaring Center, as well as serving as tow pilot for gliders and piloting a jump plane for sky divers. Next, he flew for California Sky Tour Airlines, piloting tours to Catalina Island and back, following that with a stint with Coronado Air, flying air travel club passengers down to Mexico. He also worked for a time with Palomar Pictures, doing high altitude mapping over Mexico.

Coming to Hawaii in 1973, Bob joined Alii Air, flying local people to Molokai's Kalaupapa. "My passengers were mostly clergymen, priests, doctors, and my cargo, medicine and perishable foods", all serving the needs of the leper colony at Kalaupapa. It was during this time that he became friends with Ike Keao, who has since become the guide for Bob's Sky Tour visitors to the settlement. In his time with Alii Air, he recalls that his "people" contacts were all local and that those enriching friendships have stood him in good stead, especially as he sought knowledge of things Hawaiian.

piloting to sales representative for the company. He recalls that, finding himself involved, he set out to learn everything he could from every angle possible about the flight tour business. It took only a sensible remark from a passenger sitting beside him one day in the co-pilot's seat to the effect that "since you love what you are doing so much, why aren't you doing it for yourself?" to provide the final impetus toward a business of his own. In 1977, Bob purchased a 10-passenger Beechcraft and proceeded to build himself his present fine business.

Bob recounts that he has shared the beauties of Hawaii with almost four thousand passengers in the last two years – passengers so pleased with their sky tour experience that they write glowing letters as though thanking close friends for a wonderful visit. Among the superlatives of thanks and reactions were "Your sky tour was the highlight of our whole vacation"; "I have been to Hawaii at least 12 times in the past 10 years and this sky tour was the highpoint of all my trips"; and "We put our air tour in the category of icing on the cake".

pa leper colony stop. Many letters speak glowingly of that particular experience. Bob is so enthusiastic over the breath-taking beauties along his route that he waxes poetic over the staggering sight of the highest sea cliffs in the world on the north shore of Molokai, and the fascinating shifting colors in the afternoon shadows on the high-erosion lands of Na Pali or the majesty of the "Grand Canyon of Hawaii", Waimea Canyon. Also an important part of the strong approval of his patrons, Bob feels, is that riding in a smaller aircraft is a surprising treat to those who have only flown commercial airliners, which he calls "the Queen Marys of the sky", so they have never had the real experience, the exhiliration of true flight. A major advantage for the passenger is the visibility, for the large windows of Bob's aircraft give the viewer a picture window expanse of the fabulous natural wonders of Hawaii.

Bob feels that in addition to those benefits which directly resulted from his association with Alii Air, he also profited tremendously from his two-years' experience with a local flight tour company, now out of business, where he operated in a multi-capacity position, from

Such positive tourist response is due to several Justman beliefs and practices. First is the unique nature of Bob's tour agenda. The Justman package is the only flight tour to circle the island of Oahu completely and also the only one to make the Kalaupa-

Robert Justman stands at the entrance of his 10-passenger Beechcraft which is used for Hawaiian Sky Tour. Photo by Stan Wright

Answering a query as to his future plans, Bob reveals that he has recently purchased an 18-seater, 4-engine DeHaviland Heron, which is soon to be put in operation. He states proudly that no other currently operating company has a craft of this calibre, and he is looking forward to its service in handling the accelerating requests for bookings, which he says are including more return-business and word-of-mouth recommendations from happy customers who are now sending their friends and relatives to sample the delight they experienced.

It is apparent that Bob Justman's splendid success with his Hawaiian Sky Tours is largely due to the fact that he has learned well the lessons that a good pilot and businessman should learn. A trip with Hawaiian Sky Tours is an unusually wonderful experience because Bob Justman is an unusually warm, wonderful, caring person. Like the logos on his aircraft, the frigate, or "iwa" bird, who sails on currents of air farther from land than any other bird, Bob Justman, Hawaii's "Flying Dutchman", is different and special, joyfully winging across Hawaii's skies, sharing uncommon vistas with the world's beauty-seekers.

THE NEW YORK TIMES, SUNDAY, MAY 2, 1982

San Diego Suffering From Global Tuna Glut

SAN DIEGO, May 1 (AP) — As the super seiners sit idle with their 1,200-ton loads of frozen tuna, waiting for weeks to unload, fishermen talk bitterly of "those fish buyers."

The canneries that consign them to the sea are cutting back. Seafood sales are flat, leading to layoffs of almost 6,000 workers in two of the biggest companies alone. A worldwide tuna glut is growing.

The industry that has kept 2,400 United States tuna fishermen afloat and pumped $650 million a year into the United States economy has run aground. No other city feels the impact as severely as San Diego, home to the 140-boat United States tuna fleet that sets out each January for the first of two voyages of two to three months tracking tuna in the Pacific. The fleet, made up of $12 million vessels equipped with nets, helicopters and modern refrigeration systems, is the biggest it has ever been.

A Rise of Only 1 Percent

But in four weeks, the Bumble Bee plant here is scheduled to close indefinitely. Star-Kist has ordered its three canneries closed for at least three weeks. And a spokesman denied that Van Camp, San Diego's other cannery, was up for sale, but he said the "assets could be sold."

"Americans are buying less meat, less tuna, less everything," said Manuel Neves, fleet coordinator for the American Tunaboat Association. "Every year it's been a rule that fish production goes up 7 percent, but last year consumption went up only 1 percent."

At the same time, imports from a growing number of tuna-fishing nations have snarled negotiations between the canneries and the American Tuna Sales Association, which represents fishermen. Seiner owners are being asked by processors to cut their price for yellowfin, the bigger, white-meat tuna caught mainly by American fishermen, by as much as 40 percent. They say the reason is to compete with prices for smaller tuna such as yellowtail and skipjack caught by Japanese, Indonesian and other foreign fishermen.

Fishing industry spokesmen say that any setback, even a brief cannery shutdown, can turn a profitable year into a losing one.

"The younger men are angry about all this," said Mr. Neves. "Many of them will make very little money. They face dangers at work and uncertainty at home."

Gil Rodriguez, who has sold provisions to the seiners for 10 years, said he was quitting the business.

"I'm closing the doors because I believe it's ridiculous to try to continue in the shipchandlery business with boats closed down for 30, 60, 90 days," Mr. Rodriguez said. "I'm going to purchase a gill net boat and try fishing for bottom fish. It's either that or selling apples on the corner."

But in addition to foreign competitors, who often sell their catch to canneries in Puerto Rico and Samoa for eventual distribution in America, fishermen are being squeezed by the cost of fuel, which has doubled since 1979, and recurring boat seizures in territorial disputes.

In recent years, American vessels have been seized off Panama, Peru, Mexico, Ecuador, Colombia and El Salvador. Those nations enforce a 200-mile

(over)

Star-kist to Close All Its Tuna Plants

Combined Dispatches

LOS ANGELES — Star-kist Foods Inc., the nation's largest tuna canner, will close all three of its plants for three weeks to offset a world tuna glut in a weak consumer market, Vice President Edward A. Ryan said.

The shutdowns will begin Friday. The planned shutdown follows an announcement made last week by Castle & Cooke Inc. that it will close its Bumble Bee brand tuna packing plant in San Diego in late May, idling 900 workers indefinitely.

Castle & Cooke said that shutdown will not affect the operations of its Honolulu tuna packing plant.

The closings leave several tuna fisherman in San Pedro, the Los Angeles harbor community, with 1,200 unwanted tons of frozen fish aboard their boats, said August Felando, president of the American Tunaboat Association in San Diego.

Consumers had been paying between 99 cents and $1.05 for a six-ounce can of tuna in some Southern California supermarkets.

Ryan said wholesale costs fell last week and triggered a quick drop in retail prices, producing "an increase in sales that's quite gratifying."

Precise figures for the decline were not immediately available.

Star-kist's Terminal Island cannery in Los Angeles will shut down April 23, idling 2,000 workers. Ryan said a facility on American Samoa with 1,300 employees will close April 23 and the third plant in Mayaguez, Puerto Rico, will be idle for three weeks beginning May 28.

Monday, April 19, 1982 Honolulu Star-Bulletin A-15

Sorry, Charlie, Schools Find Tuna Too Expensive

By Helen Altonn
Star-Bulletin Writer

Hawaii's public school children haven't been served tuna for five years because it's expensive and not very popular, a Department of Education official said yesterday.

He appeared before Sen. Richard Henderson, R-1st Dist. (Hawaii), chairman of the Senate Economic Development Committee, to testify on a proposed Senate resolution asking public institutions in Hawaii to expand use of locally canned tuna.

The measure notes the "superior quality" of tuna processed in Hawaii.

But it says reduced sales of the product "have raised doubts about the continued operation of Hawaii's only tuna canning facility" and the employment of about 500 persons.

James E. Edington, assistant superintendent of the DOE's Office of Business Services, said the School Food Services Branch hasn't used tuna — local or otherwise — since 1977.

He said the branch made tuna available this year as an alternate lunch to district menu committees for 1982-83 but the committees omitted tuna in planning their menus because of a number of problems.

He said the cost of local tuna exceeds the guideline for school lunches at about 23 cents. With milk added at 25 cents, there wouldn't be room in the budget to give the children bread or other items, he said.

"The product is not very popular and has menu limitations," he said.

He said local tuna also is generally available only in small cans and institutional-size cans are needed for volume services in the schools.

The schools also prefer water-packed tuna to keep costs and fat content down, he said, explaining that local tuna is more readily available packed in oil.

Honolulu Star-Bulletin
4/18/82

THE WALL STREET JOURNAL,
Tuesday, April 20, 1982

Heinz's Star-Kist Unit Plans 3-Week Closings At 3 Tuna Canneries

By a WALL STREET JOURNAL *Staff Reporter*

LOS ANGELES — Star-Kist Foods Inc. said it plans three-week closings at three tuna-packing plants because of an oversupply.

Star-Kist, a unit of H.J. Heinz Co., Pittsburgh, said its Terminal Island, Calif., plant will close this Friday. Plants in Puerto Rico and American Samoa will begin their closings later.

Star-Kist's vice president of administration, Edward Ryan, attributed the oversupply of tuna to strong catches in all the major tuna-fishing areas. "Sales have held up fairly well," he claims. To sell the current inventory, he said Star-Kist will lower prices, hoping that grocers will offer sales at 79 cents for a 6.5-ounce can of chunk light tuna. Recent price promotions have been at 89 cents a can, and normal retail prices are somewhat above that level, he said.

Mr. Ryan said the cannery closings will hit hard at the domestic tuna fleet, which already has been struggling with high interest rates and fuel prices. He said Star-Kist is negotiating with boat owners to obtain lower prices for the tuna that Star-Kist buys, which he said could help stabilize the market.

Last week Castle & Cooke Inc., Honolulu, reported that it closed a tuna plant in San Diego. The company cited "unprofitable operations caused by a weak tuna market and excessive inventories."

Protester leaves Kahoolawe before U.S. planes bomb island

WAILUKU — U.S. planes taking part in the five-nation RIMPAC naval exercise bombed Kahoolawe yesterday but protester Harry K. Mitchell Sr. was not on the island, the Protect Kahoolawe Ohana said yesterday.

Ohana spokesmen said Mitchell returned to Maui early yesterday morning after his water ran out and he began to suffer medical problems, apparently because of the lack of water.

They said Mitchell, a 62-year-old retired carpenter, returned the same way he left last week — paddling a modified surfboard which he constructed himself. Mitchell was reported to be at a home in Paukukalo yesterday.

In a statement left with Ohana members last week, Mitchell had said he was going to Kahoolawe to "protest the bombing and desecration of God's creation, the island of Kahoolawe."

The U.S. Navy had been searching for Mitchell on Kahoolawe, but "as far as the Navy is concerned, he was never there," said Lt. j.g. Liza Collins, the 3rd Fleet public affairs officer for Kahoolawe.

At Chang's Beach near Makena, other members of the Ohana indicated that they may plan another illegal "invasion" of the island aimed at halting the use of the island as a target by American and foreign navy ships involved in RIMPAC.

Dr. Emmett Aluli and Palikapu Dedman also said they are planning a demonstration Thursday in which boats will go within two miles of Kahoolawe to protest the naval exercises.

Aluli asked boat owners opposed to the bombing to volunteer to meet at Kamaole Beach Park No. 1 in Kihei at sunrise Thursday. He said the demonstration will attempt to "blockade" the target island, although the effort will be "legal" since the Navy does allow boats to operate within two miles of the island.

Although Mitchell had urged that no other Ohana members follow him, Dedman said: "We respect the elders. What the elders have done, we believe cannot be wrong."

In related news yesterday:

● The Navy said that among the five nations taking part in the massive maneuvers, Japan, Canada and the United States all have been planning to bomb the island. Australia and New Zealand, however, do not intend to use Kahoolawe as a target.

Collins said the countries involved decided to release the information because of the intense public interest in who was and who was not going to use live munitions. But she said that the tactical decisions were made months ago by the individual commanders and that recent protests had nothing to do with the plans.

American aircraft from the carrier USS Ranger bombed Kahoolawe yesterday and Sunday. Lt. Cmdr. Roger Copeland said RIMPAC operations on Kahoolawe will continue this week.

● Maui Mayor Hannibal Tavares released a letter he sent to President Reagan asking that the Navy withdraw its invitation to the four other countries to join in bombing Kahoolawe. "It is one thing for our own Navy to desecrate the aina (land); it is another when foreign powers are invited in by the Navy to add to that desecration," Tavares said.

● The Office of Hawaiian Affairs has asked the consulates of Japan, New Zealand, Canada and Australia to stop the countries' forces from bombing the island.

OHA Trustee Walter Ritte, one of the founders of the Protect Kahoolawe Ohana, also called upon Gov. George Ariyoshi to join the opposition to the RIMPAC bombing. Ariyoshi was not available for comment yesterday.

● The Greenpeace organization said RIMPAC ships refueled from a U.S. tanker within 25 miles of Nihoa in the Leeward Islands, despite federal regulations forbidding such operations within 50 miles of the national wildlife refuge.

Tern Island Issue Nears a Solution

By Helen Altonn
Star-Bulletin Writer

U.S. Interior Department officials have indicated they are willing to try and resolve a jurisdictional dispute with the state of Hawaii over Tern Island, about 600 miles northwest of Oahu, says state Sen. Wadsworth Yee.

The Republican legislator and chairman of the Western Pacific Regional Fishery Council is pressing Hawaii's case for ownership and use of the island to expand the state's fishing industry, with opposition coming from the Interior Department's wildlife conservation agencies.

Yee contends that the 57-acre island can be used compatibly for fisheries support, research and wildlife preservation, and he is seeking its return to the state by a presidential executive order or a directive from the secretary of interior.

"If there is no resolution, I will file suit in court and bring a judicial determination, which is about time," he said in a recent interview.

However, he said he has discussed the issue with Undersecretary of the Interior Donald P. Hodel. He said Hodel was "open-minded, cooperative and encouraging. Others (in Hodel's position) never have been."

"He mentioned to me that if we have a valid case it would be reasonable to turn it over to the state," Yee said.

TERN ISLAND is included in the City and County of Honolulu and is part of French Frigate Shoals in the Hawaiian Islands National Wildlife Refuge.

Hawaii has tangled with the federal government over Tern's ownership since the annexation of the Hawaiian Islands to the United States as a territory in 1898.

The state sought control of the island when it was abandoned by the Coast Guard in 1979 as a navigation station. It was turned over instead to the Interior Department and put under the administration of the U.S. Fish and Wildlife Service.

But Gov. George Ariyoshi obtained a commitment from then Interior Secretary Cecil Andrus that a final decision on the island's use would be postponed until a study was done exploring different possibilities.

The matter also was left open to give the state an opportunity to submit a specific request for use of the island, and proposals were made for a fisheries base there and for a commercial fishing feasibility study of French Frigate Shoals.

SHALLENBERGER SAID the number of monk seals showing up on the island "has gone up radically since the Coast Guard left," from an average of three to a range of 35 to 55 at various times.

But he stressed that the wildlife service has attempted to cooperate with fishermen to provide emergency aid and radio support. He said he planned to meet with the state fisheries coordinating committee to discuss other means of supporting the fishing industry without compromising the wildlife resources.

"It's frustrating in a way," he said. "We have a good working relationship with several fishermen who are regularly in the Northwestern Islands. We're trying as much as we can to help people who are there. There is a real interchange of support."

The Tern Island case is only one of a series of state-federal jurisdictional disputes over waters and areas of the Hawaiian Archipelago, stretching 1,523 miles across the Pacific from the Big Island to Kure.

Ariyoshi said in a recent letter to Yee that he has asked Susumu Ono, chairman of the state Board of Land and Natural Resources, "to lend whatever support and assistance necessary to secure the use of Tern Island for fisheries development and, in so doing, to give every consideration to protecting the unique wildlife resources inhabiting the Northwestern Hawaiian Islands."

ARIYOSHI ADDED: "Because the Tern Island issue has broad ramifications that bear upon the state-federal governments' jurisdictional dispute over the archipelagic waters of the main Hawaiian Islands, as well as the waters around the Northwestern Hawaiian Islands, I have also asked Dr. John Craven, marine affairs coordinator and director of the Law of the Sea Institute, to provide his expertise on this matter."

"We are currently addressing other state-federal land-related jurisdictional concerns, such as Piers 39-40 and a portion of Fort Armstrong," Ariyoshi said.

A study report contracted by the Fish and Wildlife Service after taking over Tern Island listed optional uses but basically said final decisions should await completion of a state-federal fisheries research program in the northwestern islands.

The report said the five-year study should help answer the key question of "the degree to which commercial exploitation of marine resources in the Northern Hawaiian Islands is compatible with wildlife conservation."

However, the projects were rejected because the National Marine Fisheries Service said the activities would jeopardize Hawaiian monk seals and green sea turtles inhabiting the area.

IN ORDER TO meet federal mandates to conserve endangered and threatened animals, the fisheries service said the Fish and Wildlife Service should "continue the strictly controlled use of Tern Island and not allow any increase in the use of Tern Island by man."

It was recommended as an alternative that the state look into a mother ship operation to support fishermen in northern Hawaiian waters.

Yee argues that "both the utilization of the latent fishery resources of the Northwestern Hawaiian Islands and the wildlife preservation can be assured and properly balanced."

He said the monk seal and green turtle "are subjected to a whole series of state laws that guarantee as much, if not more, protection when compared to federal laws."

Yee's staff prepared a report for the Interior Department tracing the complex history of Tern Island and "providing the legal underpinning" for the state's claim to waters and submerged lands of the refuge islands.

The report points out that the Navy enlarged Tern Island in 1941 from an 11-acre sandspit to a 57-acre airstrip with land created from dredged coral which was "state material," thus supporting the state's ownership claim.

YEE SAID THE records also "show that the Navy returned Tern Island to the Territory of Hawaii after the island was no longer needed for wartime operations.

"The Territory of Hawaii subsequently permitted the U.S. Coast Guard to use Tern Island as a Loran station. Why the Coast Guard in 1979 returned Tern Island to the Department of Interior is perplexing at most, unless they were supporting another federal agency instead of the state of Hawaii."

The Fish and Wildlife Service maintains that the Navy never had official jurisdiction over Tern Island in the first place and therefore couldn't legally transfer it to Hawaii.

"It is the service's position that Tern Island is legitimately federal government property," said Robert Shallenberger, supervisory wildlife biologist for refuges and wildlife resources for the Hawaii area of the Fish and Wildlife Service.

And the overriding interest of the service is protection of rare and endangered birds and animals which use Tern Island as a home, he said.

SHALLENBERGER SAID the research findings and options are expected to be ready in April or May next year for evaluation and "some solid directions" on Tern Island's management.

"There is some confusion who is going to have planning and long-term responsibilities," he said, "but at this time there is no reason to suspect our jurisdiction is going to change as a result of the study."

Ono said that if the "whole range of issues" relating to federal-state jurisdiction can't be worked out, they may have to be settled in court. But for now, he said the state attorney general has a unit exploring the problems and developing the state's position.

"Sen. Yee's efforts and what the state administration has been doing are very compatible and consistent," Ono said. "We have been in touch with local Fish and Wildlife Service officials and we are continuing to push for the use proposed by our (fisheries) project."

Saturday, September 26, 1981 Honolulu Star-Bulletin A-9

Lots of Open Space

Your Aug. 23 article describing "statistical aggression" on the part of the federal government may have left some readers with the erroneous impression that the Fish and Wildlife Service has somehow taken over a vast segment of ocean in our Northwestern Hawaiian Islands during the last year or two.

This is simply not the case. The federal government's claim to certain lagoon waters in the Northwestern chain dates back to 1909 when President Theodore Roosevelt first established a sanctuary for native seabirds.

The ocean waters claimed as part of what has now come to be known as the Hawaiian Islands National Wildlife Refuge basically only involve three sites—French Frigate Shoals, Maro Reef, and Pearl and Hermes Reef.

When quoted out of context, 258,000 acres sounds like a substantial area. However, in proper perspective, they only constitute about 8 percent of the marine habitat within the 100-fathom curve contained in the 1,100 miles of our Northwestern chain. The Hawaiian Islands National Wildlife Refuge can therefore be accurately viewed as mere specks spread over a huge ocean area.

The vast majority of this ocean area is readily available for the expansion of Hawaii's fishery industry, should such ventures prove to be economically feasible.

Barbara J. Johnsen
Corresponding Secretary
Hawaii Audubon Society

FORUM

the Readers' Page

A Fight Over Lagoon Water

By Carl Zimmerman

Assistant Editor, Editorial Page

THE FEDERAL GOVERNMENT stands accused of "statistical aggression."

That is state statistician Robert C. Schmitt's description of an increase of nearly 258,000 acres in the inventory of federally owned land in the State of Hawaii.

The discrepancy was not the first to be discovered by Schmitt.

In December 1979 he wrote to the federal General Services Administration to point out an apparent increase of more than 190,000 acres in federally owned land in the Islands in the GSA's annual publication on federal property holdings.

Two months later, Schmitt received a telephone call advising him that the published figure was the result of a computer error in data reported by the Navy. The correct figure, he was told, was 402,938.6 acres — not 308,298.3 acres.

This year Schmitt looked at the data for 1979 published in the 1980 edition of the Statistical Abstract. He found federally owned land in Hawaii given as 661,000 acres.

"If this is true," Schmitt wrote to the GSA, "the federal government has increased its Island holdings by 258,000 acres (or 64.0 percent) in a single year — an addition equal to two-thirds the land area of Oahu, our **most populous island.**" He requested **an explanation.**

THIS TIME it was no computer error. The GSA acknowledged that

The federal government is charged with statistical aggression.

the new figure represented an increase of nearly 258,000 acres over the previous year.

The increase, the GSA said, "is almost entirely due to a correction of acreage holdings submitted by the U.S. Fish and Wildlife Service. That office revised a Hawaiian Islands National Wildlife Refuge holding from 1,906.5 acres to 254,418.1 acres to include the lagoon water acreage of the circular reefs and shoals."

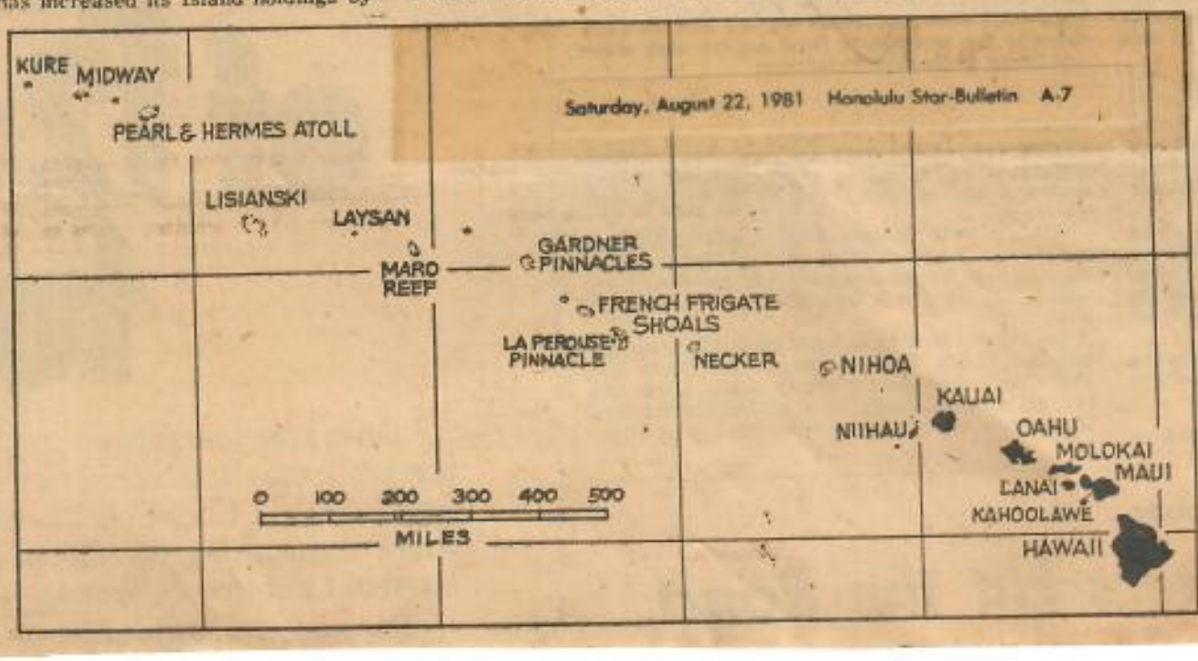
The Hawaiian Islands National Wildlife Refuge covers the Leeward or Northwest Hawaiian Islands, specifically Pearl and Hermes Reef, French Frigate Shoals, Nihoa and **Necker Islands, Gardner Pinnacles,** Lisianski and Laysan Islands and Maro Reef. They are part of the State of Hawaii although they have no human inhabitants.

The state claims that the federal government's jurisdiction covers only the land above water. The federal government claims both the "emerged" and submerged land — the lagoon water acreage.

The issue is not an academic one. It affects the state's plans to promote commercial fishing in the Leeward Islands and the federal government's protection of wildlife habitats.

In 1978 the state Legislature passed a bill and a resolution to assure state jurisdiction over the fringing reefs and waters of the Leeward Islands and to declare state opposition to their inclusion in the national wildlife refuge.

State Land Board Chairman Susumo Ono says the state has not abandoned that position despite the inclusion of the submerged lands in the federal inventory. Ono says no efforts are currently in progress to resolve the question but a settlement will have to be reached eventually.



A-3

Monday, April 12, 1982 Honolulu Star-Bulletin

Tern Island Could Become Fisheries Base

By Helen Altonn
Star-Bulletin Writer

U.S. Interior Under Secretary Donald P. Hodel has suggested several means of accommodating Hawaii's desires to use Tern Island for a fisheries station without a legal fight between the state and federal governments.

In a recent letter to State Sen. Wadsworth Yee, Hodel said he would be glad to consider a cooperative agreement between the Interior Department and Hawaii for joint use of the Island, about 600 miles northwest of Oahu.

Yee, who has pressed Hawaii's case for use of Tern Island as a state legislator and chairman of the Western Pacific Regional Fishery Council, said Hodel's letter is very encouraging after the Interior Department's previous unbending position on the issue.

An earlier proposal submitted by the state Board of Land and Natural Resources for a fisheries station on Tern was rejected because the National Marine Fisheries Service said the activities would jeopardize Hawaiian monk seals and green sea turtles in the area.

HOWEVER, HODEL suggested that a cooperative agreement would be one way of providing for fishery support at Tern Island without litigation, which "could be extremely costly and time-consuming."

He asked that the state provide a more detailed proposal on what it wants to do at Tern Island and French Frigate Shoals.

Land Chairman Susumu Ono said, "We will follow up and expand the original proposal in hopes that we can get a favorable decision."

Hodel asked for specific information on the type of aircraft that would be using the runway, frequency of flights, safeguards in transfer of fuel, dredging that might be required and the state's budget estimates for the station.

He asked for "assurance that the state is prepared to provide full economic assistance to the endeavor throughout the term of the cooperative agreement."

HODEL NOTED that activities already are under way in Hawaii to help resolve conflicts over the use of Tern Island through the Tripartite Cooperative Agreement between the state, the Fish and Wildlife Service and the National Marine Fisheries Service.

Research has been conducted under the five-year agreement to assess resources of the Northwestern Hawaiian Islands and it is nearly completed.

Although analysis of the data and reports may take another year, Hodel said the preliminary results are available for use by an inter-agency team recently established to develop a plan for future use of Tern Island that considers both wildlife and economic interests.

"Perhaps your concern for fishery support at Tern Island can be satisfactorily handled in this recently initiated planning effort," Hodel said.

GOV. GEORGE ARIYOSHI has supported Yee's efforts to obtain fisheries use of the 57-acre Tern Island, now being controlled by the U.S. Fish and Wildlife Service for wildlife conservation.

Ariyoshi also has the state attorney general's office working on broad questions of federal-state jurisdiction for lands and waters in the Hawaiian Archgipelago, stretching 1,523 miles across the Pacific from the Big Island to Kure.

Hodel said his office also is reviewing reports on legal claims of Hawaii and the federal government to Tern Island and to waters and submerged lands of the northwestern Hawaiian Islands.

He said the Secretary of Interior's authority is restricted on matters regarding transfer of lands in the National Wildlife Refuge System, of which Tern Island is a part.

But he said the legislation does not prevent cooperation in management of refuge resources and "the legislative' history clearly indicates that cooperation is even desirable to avoid costly and unnecessary duplication of expertise in management of refuge resources."

Test's success could lead to shrimp fishery

By Jan TenBruggencate
Advertiser Kauai Bureau

LIHUE — A shrimp-catching experiment last weekend achieved spectacular results and could mean a real future for a Kauai shrimp fishery, said Jeremy Harris, the island's marine adviser.

Harris said a series of eight traps — hammered together out of 55-gallon drums, plastic garbage cans, and devices covered with burlap and tar paper — picked up 40 pounds of deep-water marine shrimp overnight.

And that happened in an experimental session in which a boat went five minutes out of Nawiliwili Harbor and dropped the traps in 150 fathoms — 900 feet of water.

"Everything worked," Harris said. And a small, wire-mesh trap worked as well as a modified oil drum, meaning small collapsible traps could be designed that would allow several hundred to be carried aboard one fishing boat, he said.

"It means that we could certainly start a shrimp trapping industry on Kauai."

Very few fishing boats regularly trap shrimp. One is run by Buzzy Agard, who helped teach the course sponsored by the University of Hawaii Marine Advisory Program. He was joined by aquaculture consultant Rick Spencer.

They presented a workshop Friday night to 80 Kauai residents, and several fishermen got together Saturday morning to build makeshift traps.

Harris said the basic idea is to have a trap with some bait in it. It's dropped to the bottom with a funnel on one end. Shrimps seeking the bait go in the funnel, but can't get back out.

Normally, traps would be dropped in the evening and picked up in the morning. If you leave them much longer, the shrimps will finish off the bait and start eating each other, Harris said.

The experimenters went out before noon to drop the traps. They picked them up Sunday and found a white eel in one trap that had gorged itself on shrimp, Harris said.

At 150 to 170 fathoms, the traps picked up a shrimp called *Heterocarpus ensifer*, which are about 3 inches long and number 30 to 40 to the pound.

In deeper water, a larger shrimp, *Heterocarpus laevigatus*, can be caught. It's not as abundant, but there are six to 15 per pound.

The best time to catch the shrimps apparently is during the winter months, which is why an average catch of 5 pounds per trap impressed Harris.

The smaller ensifer reportedly sells for about $5 per pound, and the larger laevigatus for $7 to $10 per pound.

But the ones caught Sunday weren't sold, Harris said. The group that went out to get them ate them. Most were done in a butter-and-garlic sauce, but some were eaten raw.

"One of the guys told us it's the only shrimp you can eat sashimi style," Harris added.

Imports Resulting in Trade Deficit of $1 Billion

Americans Admonished

By Harry Whitten
Star-Bulletin Writer

Instead of lobster or mahimahi, why not shark meat?

This was one of the topics discussed at a seminar held yesterday at Fisherman's Wharf aimed at persuading more Americans to view seafood as everyday food.

"Viability, profitability and economic potential are once again on the side of the industry," Rep. Daniel K. Akaka, D-Hawaii, the keynote speaker, said.

"If this trend can be complemented by a heightened public acceptance of all kinds of seafood as economical and highly nutritious sources of everyday nourishment, the future will be even brighter."

The Hawaii/Pacific Islands Seafood Marketing Seminar was held as part of its Catch America Program by the National Marine Fisheries Service, in conjunction with the Pacific Tuna Development Foundation. Catch America is described as a consumer education and marketing program supporting American island fisheries.

Participants at yesterday's seminar had a chance to sample shark meat, which they found quite tasty.

Rep. Akaka said Americans import more than 50 percent of the seafood they eat each year, resulting in a trade deficit of $1 billion annually.

"In Hawaii, where our per-capita consumption of seafood is nearly twice the national average and we are surrounded by the Pacific Ocean, two-thirds of our needs must be supplied by sources outside the state," he said. "Obviously, something is wrong."

HE SAID ONE OF the problems has been that Americans believe any seafoods other than lobster, mahimahi, snapper, shrimp and the like are second-class commodities.

"Therefore, despite the abundant fisheries available to the domestic fisherman, he can only select his potential harvest from a few saleable varieties," he said.

"Meanwhile, foreign vessels are perfectly content to reap the vast remainder of the resources we consider 'trash.' Their fishing fleets and processors thrive; their people are cheaply and nutritionally fed, and then they take the 'luxury' catch from their own waters and sell that to us, tipping the balance of payments ever further in their favor."

Marcel R. Escoffier, of the University of Hawaii School of Travel Industry Management, said that more large restaurants will put fish on their menus if they can be assured of a continuity of supply. Restaurants also need to be supplied with unusual but good tasting recipes and especially great sounding names for their dishes, he said.

In this connection, Ruth Spargo, of Hawaiian Electric Co., said she has been told that shark meat has become popular recently in California, but under a different name than shark.

MARK REED, OF GARDEN Isle Seafood, Kailua, said people have had a negative image of sharks because of such movies as "Jaws." He said profits are less on sharks than on some other fish and there are problems of handling the big fish.

Nevertheless, more and more people are discovering and liking shark meat, he said, and there is a good supply in the ocean.

State Rep. Virginia Isbell, R-4th Dist. (South

a Year

for Spurning 'Trash' Seafoods

Kohala-Kona), said the fishing industry needs a firm commitment from the state Department of Transportation to help develop an infrastructure for the industry.

"We now have an aging tuna-packing plant (which needs to be enlarged), a congested area for unloading fish, a lack of planning and system to handle boats in the harbor.

". . . Where is the plan . . . for drydock facilities, electronic repair, mechanical repair, cooperative office areas for the fishermen, a marketing area for auctions, sales pickups, etc.?" she asked.

The Pacific Tuna Development Foundation, one of the seminar's sponsors, is a private, non-profit corporation formed in 1974 to develop the tuna and other latent fish resources in the central, western and South Pacific ocean areas, Janet Swift, its administration coordinator, said.

IT IS FUNDED THROUGH a special tax on imported seafood products, with the National Marine Fisheries Service administering the funds, which are matched by the tuna industry.

The foundation has sought for a permanent funding position by being included in the federal budget so it could do long-range planning and programming. It says the Japanese fishery development organization has a budget five times that of the foundation.

"What is needed is the same kind of commitment and support that foreign competitors are getting from their governments," the foundation said in its statement presented at the seminar.

"With that support, there is an excellent chance to reap a tremendous harvest not only of fish but also of economic benefits to the United States and U.S.-related islands in the Pacific."

Rep. Daniel Akaka

Honc SB&Adv.
4/18/82

The Dispute Over Rights to Fish for Tuna

U.S. relations with South Pacific nations are being roiled by a dispute over fishing rights for tuna.

The United States claims the right to fish for tuna within other nations' 200-mile economic zones, on the ground that tuna are migratory species. Almost all other nations claim jurisdiction over all fishing activities within these zones.

In the past this issue has resulted in seizure of American tuna boats in the eastern Pacific. Now the problem is spreading southwest. One U.S. fishing vessel was seized recently in Papua New Guinea waters and another in Western Samoan waters.

Rep. Paul McCloskey, R-Calif., noted in a recent speech that under the Fisherman's Protective Act the United States must respond to the seizure of the U.S. vessel by prohibiting the importation of all tuna from Papua New Guinea unless steps toward conciliation are taken. He said such a prohibition would probably result in the failure of the operations of two tuna companies in Papua New Guinea, which employ more than 1,000 workers each.

McCloskey called for the repeal of the Fisherman's Protective Act and U.S. acceptance of foreign nations' jurisdiction over tuna within their 200-mile zones.

He said the act "has had an incredibly deleterious and dangerous impact on our relationships with friendly nations who understandably resent what appears to them to be an arrogant and imperialistic policy . . . A continuance of strong-arm tactics against a small country such as Papua New Guinea may endanger long-standing friendships far more valuable to us than a slight increase in tuna costs through acceptance of licensing fees by our tuna industry."

Our interest in maintaining friendly relations with the South Pacific nations far outweighs our interest in unrestricted rights to fish for tuna. Congress should act before serious damage is done.

Kauai Will Have Best View

By Helen Altonn
Star-Bulletin Writer

If skies are clear at 6:20 p.m. on July 30, Oahu residents will be able to see about 60 percent of a total eclipse of the sun before it dips out of sight at sunset.

Kauai residents will have a better view of the spectacular event, which occurs when the moon blocks the sun from view, while observers on the other Neighbor Islands will see less of it.

It is the first total eclipse to be visible here in recent times, according to Bishop Museum astronomers, and there won't be another one for 10 years.

"There will be one — a beautiful one — here in 1991," said Walter R. Steiger, manager of the Bishop Museum's Science Center and Planetarium.

Unfortunately, he said, the July 30 eclipse will end just before the path of totality reaches Hawaii.

But people with airplanes or yachts will be able to see the entire event by venturing northwest of Kauai.

The total shadow of the moon will first touch the Earth at 4:18 p.m. in the Black Sea "and speed across the Soviet Union at some 2,000 miles an hour," Steiger said.

"IT WILL BE traveling from the northwest — coming across Siberia for most of its path, then out across the Pacific and swooping down over Hawaii. But it ends just as it gets to Hawaii."

However, Steiger said Oahu viewers will be able to see about 50 minutes of the eclipse, "assuming there are no clouds, because it will be low on the horizon."

It will become visible at about 6:20 p.m. with the sun about 12 degrees above the western horizon as the moon begins to move across its face, slowly taking a circular "bite" out of the sun's lower edge, Steiger said.

He estimates that about 60 percent of the sun will be covered by the moon when it disappears below the horizon at 7:12 p.m.

Kauai observers will see a little more of the sun blacked out, and the eclipse will begin a little earlier there, Steiger said.

Viewers should find a vantage point that offers a clear view of the western horizon, but they should not look directly at the eclipse, Steiger cautioned.

He suggested using special filters or viewing devices such as aluminum foil with a tiny pinhole, or a dark welder's filter.

LOUIS A. VALIER, who teaches celestial navigation courses at the YWCA, said yachts returning to the West Coast from the Transpacific Yacht Race can take advantage of the rare opportunity to see the eclipse by going a little more northwest than usual.

"They have to go north from here to pick up westerly winds," he said.

Star-Bulletin
Section C
Wednesday, July 22, 1981

# of Upcoming Solar Eclipse

"It wouldn't be much more work to go a little more northwest to see something as dramatic as this."

For those who have never seen a total eclipse, Valier said, "It is a most spectacular experience, one which you'll never forget.

"As the moon moves in front of the sun, because of the uneven edge of the moon due to its craters and mountains, the final bit of the sun is cut off unevenly," said Valier, former longtime instructor of celestial navigation at the Bishop Museum.

"The sun shining between the mountain peaks gives an effect which looks like beads of light," he said, explaining that this is called "Bailly's Beads."

"At totality, it is suddenly night and the only time that the sun's beautiful corona can be seen. Not far away beyond the path of totality, daylight continues. On land the sudden darkness causes birds to think it is nightfall and they go to roost."

VALIER NOTED that a Nautical Almanac chart states that the eclipse occurs July 31, which he said "could cause a goof of major proportions."

It will be July 31 on the west side of the dateline, but navigators who plan to intercept the eclipse on that date in this area will miss the show if they heed the chart, he said.

Steiger said a California group called "Moonshadow Expeditions" has chartered a Hawaiian Airlines jet to cross the path of totality about 350 miles northwest of Kauai at a height of 37,000 miles.

They expect to enjoy more than 40 seconds of the total eclipse.

The group is headed by Steve Edberg, an astronomer at the Jet Propulsion Laboratory in Pasadena, Calif.; Steve Greenberg, an editor and photogapher with the Lawrence Livermore National Laboratory; and Joel Harris, director of training for the Baskin-Robbins Ice Cream Co.

The Bishop Museum planetarium will have a special preview on the eclipse next week for the expedition participants. Persons interested in the flight may obtain more information from the planetarium, Steiger said.

Valier said the cruise ship Oceanic Independence also plans to leave Honolulu Saturday to rendezvous with the eclipse.

Aquaculture, Fishing Bills Get House OK

In Hawaii...

• Honolulu Star-Bulletin A-3

Wednesday, March 24, 1982

By Helen Ahonn
Star-Bulletin Writer

State legislators this year are zeroing in on Hawaii's aquaculture and fisheries development problems, not only to provide more fresh fish products for Island consumers, but for export.

Both industries would be boosted under a package of House-approved bills, most of which are expected to receive favorable Senate treatment.

The Senate also has pumped money into fisheries research and the state's highly successful system of offshore buoys (aggregating devices), designed to attract fish for the local fleet.

Many of the ocean-related House bills were drafted by Big Island Democrat Richard Matsuura, chairman of the House Committee on Ocean and Marine Resources.

One would provide $50,000 to study the possibility of establishing a major facility to repair private and Pacific fleet ships.

"IT IS ONE of the best bills to come out of the House this year," said Rep. Russell Blair, D-14th Dist. (Kakaako-Punchbowl), chairman of the House Committee on Consumer Protection and Commerce.

Matsuura said ship repairs involve "a tremendous amount of money that is slipping out of Hawaii's fingers," with more than $25 million spent on repairs for one naval ship over five years.

He said a floating barge could be used for a repair facility with a moveable work force that could handle five ships at one time, creating new economic activity and job opportunities in Hawaii.

Other House bills under consideration in the Senate would provide $200,000 to plan support facilities on Midway for Hawaii's commercial fishing fleet, $300,000 to expand the small fishing vessel loan fund, and $50,000 to develop information for guidelines and licensing of mariculture operations.

Other House bills pending in the Senate propose:

—An experimental project to see if eels can be raised for export.

—A reduced general excise tax rate on aquaculture raw materials.

—Funds to support an Oceanic Institute research program on aquaculture and livestock feed production.

—Establishment of an Aquaculture Coordinating Council as an advisory group to the state Board of Land and Natural Resources.

SENATE AGRICULTURE Chairman Ralph Ajifu, D-3rd Dist. (Windward Oahu), said he probably will consider the controversial eel bill for passage, as well as other measures to spur aquaculture research and fisheries development.

He is looking to expansion of the marine shrimp fishery in Northwestern Hawaiian Island waters, which he believes has greater economic potential than freshwater prawns being grown locally.

Rep. Gerald Hagino, D-22nd Dist. (Wahiawa-Haleiwa), introduced the bill to support work by the Oceanic Institute at Makapuu involving use of fertilizer in a food chain for acquaculture and agriculture production.

Matsuura stessed the urgency of state help for the fishing industry.

"We can't wait for it to crumble," he said in an interview, pointing out that "it would be another Puna Sugar situation, with 400 to 450 employees out of work, if Hawaiian Tuna Packers closes."

HE SAID THE Navy has indicated it would cooperate with the state in establishing a Midway fishing facility.

He also has recommended possible acquisition of a ship from the Navy's mothball fleet to serve as a mother ship and fueling station so Island fishermen can exploit rich albacore resources near Midway.

And he emphasizes the need to find a tuna baitfish to replace nehu, which is in short supply and forces fishermen to stay close to home.

Sen. Richard Henderson, R-1st Dist. (Hawaii), head of the Senate Economic Development Committee, said he supports studies for a Midway fishing facility if there is some assurance that the cannery will remain open to process the fish.

Matsuura said a "filling station" on Midway or a mother ship would cut down on high fuel costs and the time involved in the 4,000-mile trip for Island fishermen.

They wouldn't have to go back and forth, which would result "in a tremendous catch" to replace tuna now supplied to the local cannery by Japanese boats, he said.

MATSUURA SAID he told the president of the Western Fishboat Owners Association, which represents California tuna boats, "We will develop a facility (on Midway) if you folks bring your fish back to Hawaii."

He said they are willing to do this.

Matsuura also expects Hawaii's fishermen to benefit from a "pooling of information" from a satellite fish-tracking program being developed by the Jet Propulsion Laboratory for West Coast fishing vessels.

The scientists are using animal manure to produce tuna baitfish and fertilizers in the waste water to raise grain crops for livestock feed.

Maui Republican Rep. William Monahan said he was skeptical until he saw the system in operation. Now he's convinced it will help the industry "to finally stand on its own two feet."

"WE HAVE TO GO for broke now on baitfish," Matsuura said, suggesting mullet and milkfish as the best candidates because of research already done by the Oceanic Institute.

"I told fishermen before I leave this job, the one thing I want to accomplish is to have a part in finding an adequate baitfish as good as nehu," he said. "If we make that breakthrough, we will open up the blue revolution."

There also is a need to develop commercial fishing harbors closer to Hawaii's fishing grounds to enhance the local catch by small boats while the bigger ones go to Midway, Matsuura said.

A Hawaii ocean leasing program would be launched under another major bill floated by Matsuura for discussion last year.

It was recently approved by the House despite strong opposition from House Republican Leader Kina'u Boyd Kamali'i, and it still may have rough going in the Senate. But Matsuura said he feels most concerns have been satisfied with revisions to the bill the past year.

IT WOULD authorize the state land board to control use of state submerged lands and ocean waters for mariculture, marine mining and ocean thermal energy conversion (OTEC) operations in much the same way as it manages public lands.

"There is very tight control in terms of public interest," Matsuura said. At the same time, ocean development companies and research groups would have more confidence in the state because their investments and work would be protected with leases to specific sites, he said.

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Uncertainty on Tuna Clouds Midway Plan

By Bruce Dunford
Associated Press Writer

The possibility of Castle & Cooke Inc. selling or closing its Hawaiian Tuna Packers cannery at Kewalo Basin has cast a cloud of doubt over the state administration's push to establish a U.S. fishing base at Midway Island, according to state officials.

State Rep. Richard M. Matsuura, chairman of the Committee on Ocean and Marine Resources and a strong supporter of the Midway project, however, says it would be foolish for Castle & Cooke to quit the tuna business in Hawaii.

He says the proposed fishing base at Midway could make Mid-Pacific tuna fishing quite profitable.

Castle and Cooke is examining all of its seafood operations because of continuing losses, but no decisions have been made on closing or selling any of the operations, including Hawaiian Tuna Packers, according to Castle & Cooke public relations director Sam Schneider.

THE PROJECT being promoted by the state administration and Matsuura, D-2nd Dist. (South Hilo), calls for the state to acquire a surplus Navy vessel to be leased to a private company or cooperative and stationed at Midway to serve as a refueling station for the fishing boats.

It also proposes that the Navy set aside about five acres of land and pier facilites at Midway so the fishing boats can put their catches in refrigerated storage containers which would then regularly be taken by barge to the Honolulu cannery, 1,300 miles away. Matsuura says the Navy has been talking favorably about allowing the use of the land and pier.

Some of the savings the U.S. fishing boats make on fuel by not having to return to Honolulu or Dutch Harbor, Alaska, with their catches, would probably be passed along to the cannery, improving the profit margin for both the fishermen and the cannery, Matsuura said.

BEFORE THE Senate Committee on Ways and Means is last year's House bill that would allow the state to go ahead with steps towards acquiring a ship to be used at Midway. It appropriates a token $1 for that purpose, something that Matsuura says will allow the state to get moving on what could take considerable time to accomplish.

During a hearing on that bill yesterday, Sen. Richard Henderson, R-1st Dist. (Hawaii), said there had been talk that Castle & Cooke might close Hawaiian Tuna Packers.

Henry Sakuda, Director of Aquatic Resources in the Department of Land and Natural Resources, said the closing of Hawaiian Tuna Packers would be a blow to Hawaii's economy and the state's effort to expand the Hawaii-based fishing industry.

Henderson also questioned why the state wanted to go ahead with efforts to acquire a surplus Navy ship before even starting a proposed $200,000 study into the feasibility of the Midway fishing project. Money for the study is included in the House version of the state's supplemental budget.

Sakuda said the process of finding the appropriate vessel, probably a surplus yard oiler, and having it transferred to Hawaii could take so much time, it would be best if the state got it going right now.

IN AN INTERVIEW, Rep. Matsuura said the Hawaii-based fishing boats need a 4,000-mile fuel capacity to get to the fishing grounds near Midway, do some fishing and return with their catch.

Not only does fuel account for 80 percent of a fishing boat's operating costs, but 20 days are used reaching the fishing grounds and returning to Honolulu, cutting into the time spent fishing, he said.

Competing Japanese and Korean fishing fleets use mother ships so their boats can stay in the fishing grounds for long periods of time. Having Midway as a base of operations would give the U.S. fishing fleet an equal advantage and also enable the use of smaller boats, Matsuura said.

California fishermen have expressed great interest in the Midway project and probably would be willing to contribute to the costs, meaning their catches would also come to the Honolulu cannery, which might have to go to three shifts to handle the workload, he said.

"CASTLE & COOKE would be foolish to close and even if they did, I'm certain someone else would take advantage of the situation and offer to buy the cannery," he said.

Matsuura says one of the current problems for Hawaiian Tuna Packers is that it is not getting enough fish, but Schneider says that is not the case. According to Schneider, there is too much canned tuna on the market and operations at the local cannery therefore have been reduced.

"Right now, we are losing money on canned tuna," Schneider said. He said the key problem is a glut of canned tuna in the U.S. market, which is driving down the prices.

Should Castle & Cooke eventually decide to divest itself of Hawaiian Tuna Packers or its other canneries in San Diego and Puerto Rico, the most preferable means would be through a sale, he said.

"The absolute last resort would be a shutdown," he said.

The problem in the canned tuna market today goes beyond the simple economics of supply and demand, Schneider said.

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House committee approves state claim on ocean rights

By Sandra S. Oshiro
Advertiser Government Bureau

Anyone wanting to grow prawns offshore or hunt for manganese nodules in the ocean would have to ask the state for permission under a proposal making its way through the House of Representatives.

The measure, approved by the House Committee on Ocean and Marine Resources, would implement the state's long-held contention that it should approve all significant research and commercial activities within its waters and on submerged lands.

In a report, the committee said it was well aware the federal government hasn't entirely recognized the state's claim.

"Until the dispute is resolved, the entrepreneurs (or researchers) can meet the ocean leasing requirements of both state and federal governments," the committee stated.

Under the proposal, now under review in the House Finance Committee, the state Board of Land and Natural Resources would designate ocean areas and submerged lands which could be leased out for marine activities. An environmental assessment study would be required beforehand.

Aquaculture farmers, researchers and those in search of mineral nodules would have to apply to the board for a permit.

Other measures moving out of committees yesterday included bills which would:

- Appropriate an additional $5 million to repair and maintain public school buildings.
- Set aside $1 million for the Hawaii Visitors Bureau. The House Tourism Committee recommended the money be used for such promotional activities as trade shows.

PART II Page 1 LA TIMES 3 JAN 1983

WILLIAM S. MURPHY / Los Angeles Times

Albert Mangiapane, 72, stands on deck of his fishing boat docked in Monterey Harbor. A fisherman for more than 50 years, Mangiapane came to Monterey from Sicily in 1930. He has followed his quest since that time, always setting out to sea hoping for a big catch.

Half a Century on the Sea

Fisherman Recalls Monterey's Glory Days

By WILLIAM S. MURPHY,
Times Staff Writer

MONTEREY, Calif.—The prow of the Nancy M knifed into the bay, sending spray cascading off the windows of the deckhouse, where Albert Mangiapane, 72, steered into fishing waters. Like his Sicilian counterparts who have gone down to the sea here over the decades, he had one hope—a good catch.

For more than 50 years, Mangiapane has followed this quest; his face has become lined and leathered by the sun, his hands gnarled by nets, his muscles toughened by the tons of fish he has hauled.

Mangiapane remembers those first days when sardines in Monterey Bay were as abundant as minnows in a pond. It was the golden era for Cannery Row, the area John Steinbeck immortalized. Mangiapane knows it from experience, not from the book.

He came to Monterey in 1930, a year after arriving in the United States from Sicily. He had been taught to fish at the age of 7.

Mangiapane had $20 in his pocket. He found James Darvi, a cousin from Sicily, and was hired on Darvi's boat. It was an association that lasted 30 years.

Mangiapane was sending part of his meager earnings back to his family in Sicily, who had mortgaged their property to buy him passage to America.

The early 1900s had brought many Italian fishermen to Monterey as they learned from relatives and friends of the mild climate and good fishing. Most came from families who had long lived in the Sicilian villages of Isili della Femina, Favignana or, like Mangiapane, San Vito.

It was World War I that escalated the demand for sardines; the government began ordering carloads for Army food. Five new canneries were built during this period, the nucleus of Cannery Row, with jobs for 5,000.

WILLIAM S. MURPHY / Los Angeles Times

Part of the fishing fleet lies at dock in Monterey. For years, area's fishing industry has been dominated by Sicilians, many of them immigrants. Today, they are being joined by Vietnamese.

Mangiapane married Nancy, for whom he would later name his boat, in 1937. They reared three children, but times were often hard. Sometimes his share in a catch would be $10 for a week's work. Nancy, like many of the Monterey women, worked in the canneries.

"I was a forelady," she recalled, "and I was either cutting, cooking, or working on a conveyor belt as tons of sardines were processed.

"When the fishing fleet came in, we would work a 16-hour shift, with maybe a half-hour off for lunch. The pay was 25 cents an hour, and there was no overtime. Albert might be lucky to make $500 in a six-month period, and we had to live on that. We didn't have much when we were first married and were $2,000 in debt. There was little furniture in our house, not even an

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FISHING: Old Days

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icebox."

Times improved and the Mangiapanes prospered. He had his own boat built in 1950.

But then the impossible happened: The sardines vanished. The event left Cannery Row an avenue of crumbling buildings and broken wharves, some of which have tumbled into the bay.

Experts have argued over the phenomenon. You can take your choice of theories: that the spawning grounds had changed, that the waters of the Pacific had become colder or that the supply of plankton, a tiny organism on which sardines feed, had decreased.

Moved to Port Hueneme

Mangiapane moved his boat to Port Hueneme. "Here we would fish for mackerel, anchovies, sea bass and the sardines that were left," he said.

He fished there nine years and sold the boat, purchasing the smaller Nancy in 1965. Each year until 1981, he would fly to Alaska to fish for salmon. This month, he will take his boat to San Francisco to fish for herring that enter the Golden Gate waters to spawn.

The work is strenuous, but for Mangiapane there is no talk of retirement.

Today, the principal catch of the Monterey fleet is squid. Chinese were the first to establish the fishing industry in Monterey, after the Gold Rush of 1849.

Mangiapane foresees a change in the ethnic makeup of the fleet.

"Youths with a Sicilian heritage no longer want to follow in the footsteps of their fathers," he said. "They look for more profitable professions. Fishing is hard work, but the good catches are getting harder to find. Today, you see Vietnamese fishermen crewing on boats owned by men of Italian ancestry. Some of the Vietnamese own their own boats."

Watching a Vietnamese pass him on the dock carrying two buckets filled with squid, he observed:

"Some day they'll take the place of our Sicilian fishermen here in Monterey Bay."

L.A. TIMES late January 1982

The dangers of eating raw fish

Physicians warn of parasites harbored by uncooked seafood, meat

By Mimi Sheraton

NEW YORK — The reported dangers of illness brought on by eating raw fish and meat often cause fear and confusion in the minds of those who enjoy such foods, either for their aesthetic or nutritional benefits.

Among foods posing such questions are clams and oysters, which can cause hepatitis if taken from polluted waters, and rare or raw meat in the form of steak tartare or beef *carpaccio*, which can transmit beef tapeworms to humans. Recognizing the possibility of infection, but uncertain of the likelihood, some people forgo the suspected food entirely, some continue eating it, ignoring the dangers, and many eat it and worry.

Most recently, such concern has been expressed over the dangers of eating raw saltwater fish in the forms of Japanese *sushi* and *sashimi*, Scandinavian *gravlax*, South American *ceviche* and raw or green herring, which is popular in the Netherlands.

When raw, most saltwater fish that are eaten can be carriers of anisakis simplex, a parasitic roundworm that may invade the gastrointestinal tract of humans, causing mild to serious complications. But again, the warnings of parasitologists and physicians are difficult to reconcile with the absence of known infection.

"So far we have not found any anisakis," said Dr. Edith Newman medical director of the Jetti-Katz Clinical Laboratory, the leading facility in New York City specializing in testing for gastrointestinal parasites. "But then we have never specifically looked for it."

Because raw fish in its various forms is increasing in popularity, the New York City Health Department will begin a full-scale investigation late next month to determine the incidence of parasite infection in the local fish supply. Jean Cropper, deputy commissioner for environmental services, said last week that fish in the city's wholesale and retail markets and restaurants would be examined for all possible parasite infection.

Mimi Sheraton writes for the New York Times.

Attention was focused on the dangers of such parasites last fall, when the Centers for Disease Control in Atlanta reported four cases of infection by the fish tapeworm diphyllobothrium, traced to the eating of raw salmon.

In investigating 10 samples of salmon in Seattle last July, inspectors for the Food and Drug Administration found that although those particular samples contained no tapeworm larvae, they did contain the anisakis larvae. Salmon, an anadromous fish, lives in both fresh and salt water, and so can contain both types of parasites. The dangers of tapeworm from freshwater fish have long been known and recognized and almost no freshwater fish is used for sushi and sashimi, except on some rare occasions in Japan.

Gravlax, which is only lightly salted, can be a cause of both types of parasite infection. In this country, the incidence of tapeworm infection is restricted primarily to those of Scandinavian descent and to Jewish women who taste raw freshwater fish such as carp, pike and whitefish in preparing gefilte fish. Freshwater fish is generally considered safe if it has been properly salted and smoked, or cured in a heavy salt brine; as for lox.

Anisakis simplex, however, is virtually unknown in this country, and because it is hard to identify, or not even examined for, it may go undiagnosed. Even if it is diagnosed, it is not a disease that must be reported, and, unlike tapeworm, cannot be cured by medication, another reason it is hard to document.

Dr. George J. Jackson, a parasitologist who is the acting branch chief for food and cosmetic microbiology with the FDA, said, "We have seen only a slight increase in the number of anisakis cases here, but I think they are just the tip of the iceberg. Symptoms may be too mild to notice or may be misdiagnosed, most often as appendicitis or stomach cancer."

The infection can take several forms, as described by Dr. Ronald R. Roberto, deputy chief of the infectious disease section of Department of Health Services of California.

"Man is not a definitive host, so the larvae will not grow or increase in number," Roberto said. "In the mildest and most frequent cases, the worm lodges in the throat and is coughed up. If it invades the intestinal wall it can cause inflammation, nausea, cramps and diarrhea and will last anywhere from a day to a week, after which it will be over.

"In the most serious cases," he continued, "it penetrates the intestinal wall and enters the peritoneal cavity, where it may cause chronic lesions or prompt white blood cells to gather around to fight it off, thus forming a granuloma, which is often mistaken for a tumor. Then if surgery is performed, the worm can be found within the granuloma. Nevertheless, we do not consider it a major problem, in spite of the potential. But we will probably see more of it as the eating of raw fish increases."

Symptoms of gastric anisakiasis are said to develop within four to 12 hours of eating contaminated fish (intestinal anisakiasis will develop within seven days).

There is no cumulative effect from eating raw fish. It is possible to eat 100 pieces and not get anisakiasis if it is not present in those pieces, and it is possible to become infected from eating only a single piece that contains larvae, usually about 1 to 1½ inches long.

In a report on anisakiasis written in 1976 for the Armed Forces Institute of Pathology, Ronald C. Neafie and John R. Dooley, both parasitologists, said, "Infected fish are commonly marketed in this country and elsewhere; for example about 90 percent of cod fillet sold in and around Washington, D.C., contain anisakine larvae." They recommended that "public health education should discourage the eating of raw or inadequately prepared fish or squid."

At various times, contaminated fish have been found off the waters of Massachusetts, and in 1970, the Beltsville Parasitological Laboratory in Maryland reported that infected fish were found in markets in Connecticut, Maryland and New York, as well as in fish from Canada. Fish from northern waters are generally considered more likely to have anisakis simplex larvae than those from tropical waters, and the proximity to mammals such as whales, seals and certain strains of porpoises also increase possibilities because those animals are important to the life cycle development of the parasitic nematodes.

Fish that have the anisakis larvae do not necessarily transmit it to humans. While the fish are alive, the worms live in their stomachs. Once the fish are dead, the larvae penetrate the tissue that is eaten.

It is safest, therefore, to gut fish as soon as they are caught to minimize chances of the larvae's spreading. It is also possible to remove anisakis larvae from fish as it is being cut, because such larvae are visible to the trained eye, especially those of experienced sushi cutters.

To be safe, however, responsible sushi shop owners buy only the

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Raw food

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freshest fish and never serve fish in which larvae were discovered. The most susceptible fish, such as mackerel or squid, are not served completely raw.

According to Ryudaburo Kawada, the owner of the Takezushi and Kurumazushi restaurants, all mackerel is salted and then marinated in strong vinegar and squid is purchased frozen, a process that kills the parasite. Kawada also said that all bonito is infected and so is rarely ordered by non-Japanese and the susceptible yellowtail is also purchased frozen.

Shrimp, eel and octopus are always cooked for sushi. Nevertheless, fluke, porgy and sea trout are traditionally served raw and all have been found to have anisakis at one time or another. There are no reports citing tuna as a carrier.

Because of an outbreak of the parasite a few years ago in the raw herring favored in the Netherlands, the law there now requires that all herring must be gutted immediately, then salted and frozen at 4 degrees below zero within 12 hours of being caught and for 24 hours thereafter. Such freezing, or heating to 140 degrees, kills the larvae.

But though anisakis simplex is known in Japan, it is not considered dangerous by most experts there and no regulations have been established. Dr. Noboru Kagei, chief of the second division of parasitology at the National Health Institute of Japan in Tokyo, said that the number of cases is considered negligible.

Nevertheless, there has been some increase of infection reported, most notably in the Ohita prefecture, where 42 cases were reported in 1980 as against 12 in 1977, an increase possibly a result of the eating of raw mackerel by a group of men at a party.

Acknowledging that he eats raw fish often and that doing so is a custom in Japan, Kagei said it is difficult to require all fish to be frozen because so many varieties are eaten raw. But he also stated that he believes that some regulations are needed.

Putting the matter in perspective, Roberto said, "There's no point in doing fish market surveys. The parasites are there all right and they can't be cleared up. You can't treat fish. People who like to eat raw fish because they enjoy it or feel it is healthful should be aware of the risk, and go only to good clean places and if they feel any gastric symptoms should see a physician."

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Fisheries Chief Resigns in Move to Get Involved

By Helen Altonn
Star-Bulletin Writer

The state's fisheries development manager left his job yesterday, saying he wanted "to get involved in some of the things we've been talking about."

Stanley N. Swerdloff, former deputy state marine affairs coordinator, joined the Department of Land and Natural Resources in October 1978 to develop a master plan for expansion of the fishing industry as one the state's top priorities.

"It's not a case of trying to demonstrate it can be done," he said, regarding his resignation to move into the industry. "A lot of people are doing it. It's just time for me to get out and do it, too."

He said he has a small boat under construction in Haleiwa and will start a fishing operation in Kona. He also will do consulting work with the industry and will be involved in some private fishing development activities.

He plans to move to the Big Island next month after some consultant work in the Far East.

IN AN INTERVIEW yesterday, Swerdloff said he feels there has been significant progress on several fronts in the Hawaii fisheries, although some of it may have occurred as "natural evolution," with or without a development program.

"A lot of it is a matter of timing. The fishing industry is maturing, particularly in the marketing sector," he said.

He pointed to major expansion in the ahi fishery, especially on the Big Island, because of new distribution facilities and more marketing effort for export.

Other developments include a growing high-value lobster industry and the start of a shrimp fishery, he said. The state also has funded the equipment for the

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HONOLULU STAR BULLETIN 1-16-82

Dock Space Main Problem

Fisheries Growth Stymied

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first year of a pilot processing plant operated by South Pacific International Seafoods, he noted.

"Generally, I think we've sensed more optimism in the fishing industry," Swerdloff said. "Certainly, there is more interest in the part of investors."

It's estimated that fish landings have increased about 20 percent during the past two years and the value probably has increased about 25 percent because of lobster and ahi, Swerdloff said.

"I think our gains would have been more noticeable except we've gone through two or three very poor aku years," he said. "Since aku makes up a high proportion of landings, it brings the total landings down."

ONE OF THE most successful ventures conducted under the fishing master plan has been development of a system of buoys to attract fish for fishermen near shores of the main Hawaiian Islands.

Fishing also has expanded in the northwestern Hawaiian Islands, where lobster and shrimp are being caught. An albacore fishery also began several years ago north of Midway.

"It has become a very successful fishery, but we're not seeing major benefits to Hawaii yet," Swerdloff said.

He said planning has been on a 10-to-20-year basis for Hawaii's fisheries development and it "is pretty much on schedule" except that it now is hampered by serious funding problems.

"The state administration and Legislature have really backed the fisheries development program, not only morally but with money," he said.

But what should have been a $1.2 million budget this year for the programs will more likely be in the $400,000 range because state matching funds can't be spent because of federal funding cutbacks, he said.

"We've gotten almost nothing from the federal government and it has really

HE SAID THE comment often had been made that "we don't want to put money into a commercial fishing dock space because the future of fisheries is uncertain."

"We keep pointing out that lack of dock space is probably the major constraint, and as long as you have that, the future of the industry will be uncertain," he said. "We lost between 10 to 15 modern boats that were going to take up residence in Hawaii the last year because of problems getting adequate space."

Some local residents who entered the albacore fleet also had to stay on the West Coast, he said.

"I really believe we will have dramatic growth in the fishery if we can remove some off these major constraints of dock space and lack of baitfish," he said.

Transportation officials say there is no room in the crowded Honolulu waterfront to build a new harbor.

But Swerdloff said, "It's a matter of competing uses and priorities. Someone has to decide what is the most important use of these areas. As long as fisheries is given low priority, sure there is no space."

"Another concern the (Department of Transportation) has had is if they build a large facility for fishing boats and the growth doesn't occur, they'll have wasted money and the dock space won't be utilized.

"I take exception to that because there are at least several hundred, maybe thousands, of recreational boats waiting for space. There is no reason why excess dock space couldn't be made available to recreational boats," Swerdloff said.

ONE OF THE major recommendations of Swerdloff's fisheries master plan was the formation of a Hawaii Fisheries Coordinating Council, which began operating under a law passed by the 1979

LOOKING AT what needs to be done, he outlined major problems with harbor development on Oahu for commercial fishermen and small-boat facilities and launching ramps on the Neighbor Islands.

"And we still haven't made much progress in infrastructure facilities for small boats, with fuel, ice and cold storage at the harbors so boats can load up right at the harbors instead of some distance away."

The state Department of Transportation is seeking money from the Legislature to expand Kewalo Basin for exclusive use as a commercial fishing port on Oahu, but Swerdloff noted this is controversial.

"My personal view is if we expand Kewalo, if you add 80 more berths in there, the congestion is just going to get worse. And basically, by the time all the construction is finished (including a new pier 16 for fishing boats), we'll be in the same situation," Swerdloff said.

"Looking at the way the fleet is growing now, we'll be at capacity and still have a waiting list."

Those Tasty Morsels Are Hawaii Grown

By Helen Altonn
Star-Bulletin Writer

More than 600 persons attending a small business conference at the Ala Moana Hotel last week dined on a tasty shrimp that they assumed came either from Taiwan or the Gulf Coast.

One businessman commented, "Boy, it's a crime to eat Gulf Coast shrimp when there is so much here."

"I told him it came right out from underneath our doorstep, said Gary "Skip" Naftel, who has developed the largest fishing operation in Hawaii during the past 10 years. "The guy didn't believe me."

Naftel donated the shrimp for the luncheon, sponsored by the Small Business Association of Hawaii, to introduce it to the local market.

He calls it "Hawaiian Ono Shrimp," and it's coming from the ocean depths off Hawaii's Northwestern Islands.

"It's a new product and it's delicious," Naftel said in an interview. "It doesn't taste like any other shrimp...It's not rubbery; it's much sweeter, and you don't have to bury it with sauce."

Getting the shrimp is no problem for Naftel. His ships have been working almost exclusively in the Leeward Islands, where there is an estimated shrimp fishery of up to 15 million pounds a year, according to the state fisheries master plan.

BUT NAFTEL said buyers are somewhat skeptical of the deep water shrimp "because nobody's ever seen them before."

He sold 7,000 pounds of shrimp tails immediately after last Wednesday's luncheon. "The shrimp will sell itself if they just try it," he said.

Naftel is trying to develop a new source of revenue and employment for the state in his operation, now involving 43 employees on his three ships — the Easy Rider, Easy Rider Too and the Mokihana.

He put Easy Rider Too into service two years ago as the only vessel in the United States equipped to catch, process and package fish at sea.

The ship is capable of processing about 4,000 pounds of shrimp or 6,000 pounds of lobsters a day and it has freezer storage capacity for about 120,000 pounds.

"It's a $15 million on-shore plant that goes to sea, but it didn't cost $15 million or I'd be broke," Naftel quickly added. "It's a normal fish-processing plant scaled down."

The 126-foot ship represents a $4.5 million investment. Much of the gear was designed and custom-made for deep-ocean fishing with new technology opening up previously "untouchable resources."

"Basically, we are doing what we set out to do," Naftel said.

EASY RIDER TOO serves as the mother ship for Naftel's other two vessels, taking their catches aboard for processing at the fishing grounds. Because of the high costs of fuel, he said, "it doesn't make sense to send the boats back and forth to Honolulu when we can run a factory there...

"We have the only operation in the world processing live shrimps at sea. We bring them up from the ocean and process them while they're alive to establish quality."

They're immediately flash-frozen to maintain their freshness, unlike operations in other areas where the shrimp are five days old before they get to the processor, he said.

Naftel also set up his own marketing company last year, Arctic Isle Sea Products Inc., with a sister company in Alaska and offices in Ketchikan and Seattle.

"I established the company because traditional people were leery of our new product, and I decided to take the risk myself," he said.

"I decided to put all my eggs in one basket and go for it..."

Although it's going slower than he'd like, Naftel says he's "bullish on the shrimp fishery" and believes it can be a profitable new industry for Hawaii.

"WE'RE NOT competing with the fresh fish market," he said, pointing out that that 80,000 pounds of shrimp are imported into Hawaii "and ours is better tasting and it's a Hawaii product...

"All I want is a piece of the action," he said. "Shrimp entrepreneurs don't have to order from Taiwan or Mexico."

Naftel said when his ships are in port, as they are now until about Feb. 1, he sells fresh whole shrimp at the local auction "at a competitive, fair price" so dealers can get residents to try it.

SEA-GOING PLANT—A fresh supply of deep-ocean Hawaiian shrimp is quickly processed for flash-freezing aboard Easy Rider Too, a $4.5 million fish processing ship owned by Gary "Skip" Naftel. —Star-Bulletin Photo by Ken Sakamoto.

One boat is fishing and returning every week to get live fish on the market and the excess is processed, he said.

"We're taking this sales approach to get the palate of the consumer introduced to it," he said. "Go to restaurants and markets and ask for Hawaiian shrimp. Try 'em. They're really good."

He's also processing lobster tails, and supplying live lobsters to the John Dominis Restaurant through the auction.

"We had the same growing pains with lobsters six years ago," he noted, as he related his shrimp marketing problems. "Now, our lobster tails are getting more money than the Cadillac Australian tails."

Naftel said he has been working for 10 years to develop Hawaii's Leeward Island fisheries, not only for himself, but for other fishermen.

HE ENVISIONS expansion of the fishing industry with smaller boats fishing near the main Hawaiian Islands on short trips and bigger vessels extending into the Northwestern Island fisheries.

"What we're doing — the mother ship concept — other countries have been doing for years with government help," Naftel said.

Pointing to Hawaii's problems with the sugar, pineapple and tourism industries, he said: "As industries die like dinosaurs, we have to have new industries...The state government is going to be searching high and low for new industries for Hawaii and the resources are here lying around."

But while expansion of the fishing industry is a priority state program, Naftel said that "the state government just pays it lip service" with little help in marketing development for fish products.

He said some of the Hawaiian fisheries are overrated — "lobster for one. It won't support a large operation." But he said there are several potential large-volume fisheries.

Besides shrimp, he said, "There is tremendous potential in the distant albacore tuna fishery. And there is a hell of a fishery for aku fishermen, but until they whip the bait problem, that won't expand."

"In the overall picture," he said, "the Trust Territory also is going to benefit. Our shrimp is in Guam, Saipan and the Marianas. What we're doing in Hawaii could help the Trust Territory and little Pacific countries trying to get on their feet.

"We're looking to the Pacific to take over fresh frozen shrimp on the world market level."

Tuna Boat Crews Balk at Bid to Reduce Prices

By TED VOLLMER, *Times Staff Writer*

SAN DIEGO—Unionized tuna boat crews, nervous about a growing glut of tuna on the world market, are refusing to man the nets in protest of an offer from two large canneries that would pay them less for their catch.

The crews also are seeking an end to a practice in which canners may turn away some tuna if they don't need it at the time.

Home for Largest

San Diego is the home base of the U.S. tuna fleet, the world's largest. Scores of small and large seiners have been idled in recent days as the canneries, represented by the American Tuna Sales Assn., huddle with boat owners to work out a settlement.

The U.S. fleet has been working without a price contract since May, although the canneries have agreed to continue paying the contract price of $1,200 per ton, which has been in effect since November, 1979, until a new agreement is reached.

The Fishermen's Union represents about half of the approximately 2,000 tuna fishermen working in San Diego.

On Tuesday, two of the four largest canneries, Van Camp and Pan Pacific, offered boat owners $1,140 per ton for yellowfin tuna, the most popular type—down $60 from the last contract. Their competitors, including Starkist, the nation's largest cannery, and Bumble Bee, the third largest, have not yet made their offer, and the work stoppage this week was seen, in part, as putting pressure on them to improve on the Van Camp-Pan Pacific price offer.

In their offer Van Camp and Pan Pacific further agreed to pay the current $1,200 per ton price, but only if the catches are brought in from the sea packed loosely to prevent smashing of the tuna and to facilitate freezing. That controversial proposal could mean a 10% drop in each catch and could, the American Tunaboat Assn. said, drive some smaller fishing operations out of business.

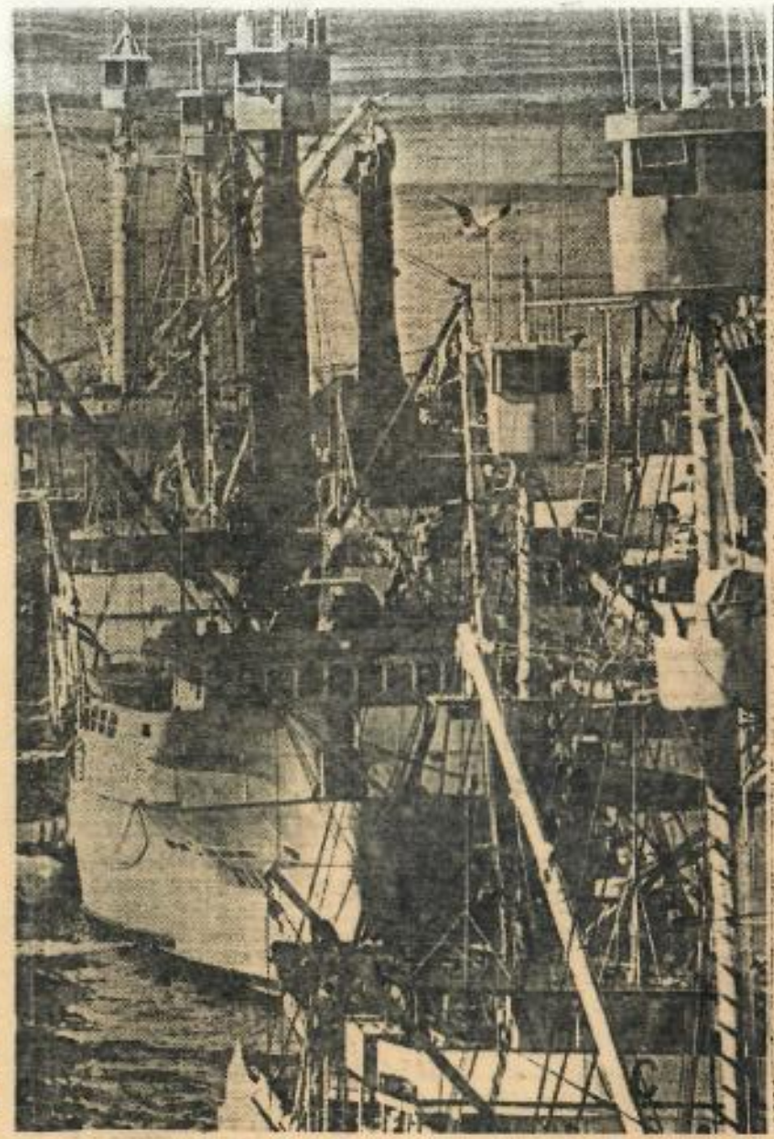
The boat owners already have been fighting low-bidding foreign competitors, as well as an increasing number of seizures by Mexico and other Latin American countries of U.S. boats that drop their nets within a disputed 200-mile territorial waters limit. The United States recognizes only a 12-mile limit.

Consumers Switching

While price negotiations were continuing Thursday, a small contingent of tuna boat owners went to Mexico City to plead with the Mexican government for restoration of 12-mile fishing licenses suspended Dec. 31 for 64 seiners.

Despite the tuna glut brought on in part by foreign competition, the retail price has not come down much and cost-conscious families have been switching to cheaper poultry and fish as a substitute.

Please see TUNA, Page 3



BARBARA MARTIN / Los Angeles Times

San Diego tuna fleet is docked because of a dispute with canneries.

LA TIMES
8 JAN 1982

TUNA: Glut on Market

Continued from First Page

In recent months, foreign competitors have threatened the domestic fleet by dumping their catches on the American canneries at sometimes half the price demanded by their U.S. counterparts. The explanation given most often is that while tuna is a popular seafood in this country, it has caught on in only a few foreign countries.

The oversupply has equally hit all four major canneries—Van Camp, Starkist, Bumble Bee and Pan Pacific (which sells under the C.H.B. brand)—and in recent months there has been little incentive by the firms to contract for catches or even pay the going rate.

Open Ticketing

The oversupply has led some boat owners to increase the practice known as "open ticketing" in which they go out to sea without a guaranteed purchase agreement with a cannery. Although most say it has not yet happened, canneries could turn away such boats if they don't need the tuna. Open ticketing was virtually unknown in the past 15 years until recent months and has increased due to the glut, owners say.

Working without a contract has led to growing concern by the fishing crews that all of their work could go for naught if too many expeditions return without any place to unload.

Independent boat owners who hire non-union crews have been willing to gamble on the canneries knowing their fishermen will be paid a flat fee regardless of their catches.

But the Fisherman's Union wages are tied directly to each haul—the unionized crew members receive a fixed share of each sale—and its leaders are arguing that it can ill afford to fish the ocean without some advance payment assurances.

Starkist officials could not be reached for comment Thursday, but there was industry speculation that the nation's largest tuna cannery may continue buying catches from "open ticket" boats for at least the time being.

One Bumble Bee official, who asked not be identified, said the company was "agonizing" over the developments and trying to analyze the effect of the Van Kamp-Pan Pacific offer before deciding whether to join the two companies' position.

ets of the News both inside and outside the communications industry. The company announced Dec. 18

Harwyn Industries and FNI Inc. agreed in principle to a merger.

rules and salary cuts of 25% to 28.4%. The ATE, which represents

A1

Fisheries Chief Resigns in Move to Get Involved

By Helen Altonn
Star-Bulletin Writer

The state's fisheries development manager left his job yesterday, saying he wanted "to get involved in some of the things we've been talking about."

Stanley N. Swerdloff, former deputy state marine affairs coordinator, joined the Department of Land and Natural Resources in October 1978 to develop a master plan for expansion of the fishing industry as one the state's top priorities.

"It's not a case of trying to demonstrate it can be done," he said, regarding his resignation to move into the industry "A lot of people are doing it. It's just time for me to get out and do it, too."

He said he has a small boat under construction in Haleiwa and will start a fishing operation in Kona. He also will do consulting work with the industry and will be involved in some private fishing development activities.

He plans to move to the Big Island next month after some consultant work in the Far East.

IN AN INTERVIEW yesterday, Swerdloff said he feels there has been significant progress on several fronts in the Hawaii fisheries, although some of it may have occurred as "natural evolution," with or without a development program.

"A lot of it is a matter of timing. The fishing industry is maturing, particularly in the marketing sector," he said.

He pointed to major expansion in the ahi fishery, especially on the Big Island, because of new distribution facilities and more marketing effort for export.

Other developments include a growing high-value lobster industry and the start of a shrimp fishery, he said. The state also has funded the equipment for the

Turn to Page A-3, Col. 1

HONOLULU STAR BULLETIN 1-16-82

Dock Space Main Problem

Fisheries Growth Stymied

Continued from Page One

first year of a pilot processing plant operated by South Pacific International Seafoods, he noted.

"Generally, I think we've sensed more optimism in the fishing industry," Swerdloff said. "Certainly, there is more interest in the part of investors."

It's estimated that fish landings have increased about 20 percent during the past two years and the value probably has increased about 25 percent because of lobster and ahi, Swerdloff said.

"I think our gains would have been more noticeable except we've gone through two or three very poor aku years," he said. "Since aku makes up a high proportion of landings, it brings the total landings down."

ONE OF THE most successful ventures conducted under the fishing master plan has been development of a system of buoys to attract fish for fishermen near shores of the main Hawaiian Islands.

Fishing also has expanded in the northwestern Hawaiian Islands, where lobster and shrimp are being caught. An albacore fishery also began several years ago north of Midway.

"It has become a very successful fishery, but we're not seeing major benefits to Hawaii yet," Swerdloff said.

He said planning has been on a 10-to-20-year basis for Hawaii's fisheries development and it "is pretty much on schedule" except that it now is hampered by serious funding problems.

"The state administration and Legislature have really backed the fisheries development program, not only morally but with money," he said.

But what should have been a $1.2 million budget this year for the programs will more likely be in the $400,000 range because state matching funds can't be spent because of federal funding cutbacks, he said.

"We've gotten almost nothing from the federal government and it has really hurt us in a number of areas," he said.

He said efforts to develop baitfish for the aku fishermen probably will take six years, instead of three or four, because of lack of funds.

"This delays everything. Without baitfish, we can't have major growth in the aku fishery, and that's our biggest potential," Swerdloff said.

He said a lot of the research and survey programs also have been derailed because of lack of federal funding.

LOOKING AT what needs to be done, he outlined major problems with harbor development on Oahu for commercial fishermen and small-boat facilities and launching ramps on the Neighbor Islands.

"And we still haven't made much progress in infrastructure facilities for small boats, with fuel, ice and cold storage at the harbors so boats can load up right at the harbors instead of some distance away."

The state Department of Transportation is seeking money from the Legislature to expand Kewalo Basin for exclusive use as a commercial fishing port on Oahu, but Swerdloff noted this is controversial.

"My personal view is if we expand Kewalo, if you add 80 more berths in there, the congestion is just going to get worse. And basically, by the time all the construction is finished (including a new pier 16 for fishing boats), we'll be in the same situation," Swerdloff said.

"Looking at the way the fleet is growing now, we'll be at capacity and still have a waiting list."

HE SAID THE comment often had been made that "we don't want to put money into a commercial fishing dock space because the future of fisheries is uncertain."

"We keep pointing out that lack of dock space is probably the major constraint, and as long as you have that, the future of the industry will be uncertain," he said. "We lost between 10 to 15 modern boats that were going to take up residence in Hawaii the last year because of problems getting adequate space."

Some local residents who entered the albacore fleet also had to stay on the West Coast, he said.

"I really believe we will have dramatic growth in the fishery if we can remove some off these major constraints of dock space and lack of baitfish," he said.

Transportation officials say there is no room in the crowded Honolulu waterfront to build a new harbor.

But Swerdloff said, "It's a matter of competing uses and priorities. Someone has to decide what is the most important use of these areas. As long as fisheries is given low priority, sure there is no space . . .

"Another concern the (Department of Transportation) has had is if they build a large facility for fishing boats and the growth doesn't occur, they'll have wasted money and the dock space won't be utilized.

"I take exception to that because there are at least several hundred, maybe thousands, of recreational boats waiting for space. There is no reason why excess dock space couldn't be made available to recreational boats," Swerdloff said.

ONE OF THE major recommendations of Swerdloff's fisheries master plan was the formation of a Hawaii Fisheries Coordinating Council, which began operating under a law passed by the 1979 Legislature.

He said the council was effective in originating and pushing for a fuel tax exemption for small fishing boats during the last legislative session and he believes the advisory group will become a "power force" as the members become more informed.

Swerdloff previously served as a fisheries consultant with the Pacific Fisheries Development Program of the Pacific Tuna Development Foundation. He also served for six years as director of the Office of Marine Resources in American Samoa.

Aiko Fung with an aku: If you're willing to do the work yourself, you can save quite a bit.

Advertiser photo

Forget tradition; experiment when judging California wines

wine & the grape

By Randal Caparoso

A few nights ago we sat down to sample two new wines from California — the 1979 Joseph Phelps Chardonnay and 1980 San Pasqual Fume Blanc — and eat dinner. By themselves the wines were exceptional — very distinct, as they say, in "varietal character." But with the food, these became flaws.

For dinner we ordered opakapaka, done, judging from the slight char, very quickly in sizzling hot butter, and garnished with no more than a squeeze of fresh lemon. The dish was a delight, but in spite of its refreshing dryness, the Chardonnay had no more to add than what the lemon already did. The wine was simply too big — its intense, oaky flavors and slightly oily texture all too distracting.

The Fume Blanc proved even less successful. The wine's characteristic herbaceousness seemed to come across to the point of excess, nearly blotting out the delicate taste in the opakapaka the chef had taken pains to preserve. What was really needed, we told ourselves, was a simpler dry white — something along the lines of a Graves, Petite Chablis, or (dare I say it?) Pouilly-Fuisse.

The question that inevitably arises from this experience is how good really are California wines? Or to put it some indeed: reminiscent, when you think about it, of Montrachet — Burgundy's rarest and greatest white wine. Hey, isn't Montrachet the wine which the French consider almost divine, to be drunk not with food but rather on one's knees and with hat off? No one demands that you drink one of these macho Californians in the same manner, but only that credit be given when due.

After all is said, the only real point remains: California wines demand their own special food contexts, and "understanding," in the words of another writer, "that goes beyond traditional formulas." In contrast to Europe, where wines are made according to classical formulas, California winemakers experiment freely and follow their own instincts, which requires wine drinkers to do their own bit of experimentation and personal judgment in search of food affinities.

ple by showcasing some of our prize Chardonnays with Julia Child's *Ris de Veau à la Creme et au Champignons*, creamed sweetbreads with mushrooms. Here the delicacy and textured richness of the dish seem to provide the grip these wines need to show off their highly complex, lush fruit and oaky demeanor.

If anyone knows their Chardonnay, it should be the winemakers themselves. In a recent food magazine, Chateau St. Jean's Richard Arrowood said he enjoys his young heavyweights best with simple fresh mushroom soup, which seems to bring out the multi-layered fruit and oak flavors in the wine. In this case, the dish is no more than a foil.

But similarly, one of the most extraordinary combinations I have recently tried was Chateau St. Jean's 1979 "Belle Terre" Chardonnay with veal chops braised with mushrooms. The effect was like a reflection upon a reflection: The precisely balanced, faintly acidic, crystal clear Chardonnay revealing the intriguingly earthy flavor mushrooms give to this delicate meat (no wonder the combination is so classic!), which in turn pointed out the subtle but distinctive, vaguely herbaceous, earthy taste (what the French would call *gout de terroir*) which always distinguishes the Chardonnays

Report

Honolulu Advertiser
Wednesday, December 2, 1981

Try a fish of a different color

By George Garties
Advertiser Staff Writer

For most people, the holiday season means party, party, party.

That's great for the guests, but how about the sponsor, who has to deal with nearly 10 percent inflation along with everybody's expectations of plenty of drinks and pupus — especially sashimi.

Well nobody's saying aku and ahi prices are going anywhere but up between now and New Year's, which is when demand crests for the raw, sliced fish. But some of Honolulu's food folks were willing to share their ideas for party goodies that won't swamp the budget.

If you and your guests demand ahi sashimi and only that, there isn't much hope, but there are some cheaper ways to feed fish to the gathering hordes.

Aiko Fung is a woman who sees a lot of fish and listens to a lot of complaints about high prices. She's a supervisor at Tropic Fish and Vegetable Inc. in the Ala Moana Farmers Market.

Fung suggests sinking the price sashimi and poki bring by using cheaper fish. "Any fish that's fresh is good raw," she said, going on to recommend ono and mahimahi.

Or take au, known elsewhere as swordfish. "People somehow don't like the color," which is white rather than the traditional red or pink. "But tastewise it's just as good," Fong said.

Rachel Haili
"Sea Legs" or bust

"I tell them to get a mix; put out one row of red, one row of white." That way, people get used to the less prestigious kind of fish, and at least half of your purchase is considerably cheaper.

Yesterday was a bad day to judge fish prices because bad weather meant a small catch, but price comparisons are still instructive. Ahi filet was going for $8.50 a pound, while au cost $6.50 and ono $5.95.

Fung also suggests thinking big when thinking aku — buy the fish whole, fillet it yourself, slice it up for sashimi and use the bones for soup. It's a lot cheaper that way, she says.

Yesterday small whole aku were going for around $2.50 a pound.

One of Fung's competitors at Farmers Market isn't all that excited about swordfish sashimi. Rachel Haili of Haili's Hawaiian Foods said about the only real pupu price cutters she can think of are some Mainland frozen products with brand names like Sea Legs.

Those are pressed-together, dyed mixtures of crab and fish meat made to look like king crab legs. While Haili didn't exactly wax poetic about the stuff, she does sell it in poki, a favorite appetizer of seafood, usually raw, mixed with seaweed and onions and marinated in shoyu.

Haili also mentioned something usually sold in cans as "abalone-like shellfish." It tastes a lot like abalone when served sliced thin or in poki, she said, and the cost difference is considerable — about $3.25 a 10-oz. can instead of about $8.50 for the real thing.

"It's always a headache to try and think what to serve in place of sashimi," Haili said. Her family's answer? "We pay the price."

UH Panel Examines Hawaii

By Harry Whitten
Star-Bulletin Writer

The possibility that commercial fishing could be equal with the pineapple industry in economic impact in the state was presented at a panel discussion yesterday at the University of Hawaii.

But doubts concerning the potential and concern about the impact of fishing on animal and plant life of the northwestern Hawaiian Islands also were expressed by panelists at the UH Environmental Center forum.

"You have to evaluate the risks versus the potential gains," said Sheila Conant, of the UH general science department.

Hawaii must import two-thirds of the fish eaten here but local fishermen should be the suppliers, said Louis Agard Jr., a commercial fisherman.

The other panelists were: Richard Shomura, National Marine Fisheries Service; Stanley Swerdloff, state Department of Land and Natural Resources; and Robert Shallenberger, U. S. Fish and Wildlife Service.

GENERALLY, AGARD and Swerdloff argued for developing the fishery resources while Conant and Shallenberger emphasized protection of native birds, the endangered Hawaiian monk seal and threatened green sea turtle, and of rare plants and insects. Shomura said he was halfway between the opposing viewpoints.

It was Swerdloff who said commercial fishing could be equal in impact with pineapple. He said that management is the key to the balancing of preservation with development that may be necessary but sometimes may be harmful.

He said the state cannot manage its increasing population without economic development, that tourism is not the only answer, and that fisheries offer a possibility for economic diversification.

"Does development equate with destruction? I believe the resource can be managed," he said. "Preservation and fisheries are not mutually exclusive."

Modern fishing boats are quite expensive, ranging in cost from $2.5 million for a vessel such as Easy Rider Too down to a minimum of $300,000-$400,000.

With such large investments, fishermen will want to perpetuate the fishery and will not want to do anything, such as harming the native biota, that would arouse opposition to their activities, Swerdloff said.

He said he knew of no instances of fishing vessels harassing seals, turtles or birds.

AGARD, WHO fished in the northwestern Hawaiian Islands from 1946 to 1956, agreed that wildlife needs protection and said exploiters had destroyed animals in years past. But he also disputed contentions that a fishery would be adverse to wildlife and said that more concrete information is needed, not assumptions.

Today Hawaii has a population of

. . . And big turtles, fat se

By Jan TenBruggencate
Advertiser Kauai Bureau

TERN ISLAND — We flew over 400 miles of open ocean to reach the ark that is Tern Island.

Giant turtles glided among the coral heads that stud French Frigate Shoal's lagoon. Big, fat Hawaiian monk seals stood out against the white sandspits.

And as the twin-engine Beechcraft landed on the packed coral runway, enormous clouds of birds rolled up from the surface. Most landed again quickly, but hundreds of great frigatebirds kept rising on air currents, going ever higher in a great spiral until the top ones were the tiniest spots against the bright North Pacific sky.

Tern is the largest of the sandspits in this lagoon, and thus supports the biggest bird populations. Seabirds constantly soar over thousands of square miles of ocean. They stay out for months at a time, resting on the water or on the wing.

Eventually they come to land, but only for mating, egg-laying and raising the young. There isn't much land, and there are millions upon millions of birds. They use every spot they can.

Some nest in the upper branches of shrubs, some go to the lower branches, some nest on the ground, and some burrow under the ground. In the spring and summer, 11 different species can be found nesting on Tern Island at the same time. Three boobies, three terns, two noddies, the frigatebird, Christmas shearwater and red-tailed tropicbird. And a few other kinds of birds might just be hanging around.

By comparison, in late October there are hardly any birds. But to me, it seemed packed. I walked around after we'd unpacked the plane.

The frigatebirds were still sweeping overhead. Pure white fairy terns came and hovered curiously above me. Black noddies sat in their nests in the heliotropes. Red-footed boobies soared across the runway.

A trio of migratory ruddy turnstones scampered along, and some golden plovers pecked at something on the coral.

The seals, now virtually unknown in the major Hawaiian islands, have their most stable population at this lagoon. On the tiny sandy islets they haul out to laze in the sun and to have their young. They are sleek and quick in the water, but on land, ponderous. The seals grow to eight or nine feet in length and up to about 750 pounds. They move just like people would on their bellies with hands tied behind them and ankles joined.

eals now frolic unmolested

Years ago, they were slaughtered for their skins and blubber. Today, the wildlife personnel try to leave them alone.

There was one caught in a coral cave. We tried to coax it into a net to be hauled out, but fierce yellow teeth convinced us to try another way. One end of the cavern was collapsed to form a ramp, and the seal came out on its own.

Later, a seven-footer broke up a night tennis game by simply moving onto the court. It wouldn't be chased off, and when it left of its own accord, it went right through the netting at one end.

The shoal is the largest breeding ground in the North Pacific for the green sea turtle. The big old females come ashore, dig holes with their flippers and lay their eggs there. On August nights, the eggs hatch and the young dig their ways to the surface and go to sea. They used to do it on the main Hawaiian islands, but don't any more. Kauai old-timers recall seeing turtles coming ashore along the Na Pali coast to lay eggs.

Refuge Manager Rob Shallenberger and I went diving in the French Frigate Shoal lagoon one afternoon, kicking barefoot among the coral bluffs with just snorkel and mask. Reef fish weren't afraid; you could nearly touch one with a finger. Curious 30- to 50-pound ulua swam up to inspect us. A giant ray moved in the shallows. And I found a 300-pound sleeping female turtle in a depression at the base of a coral pillar.

But although the lagoon is rich in sea life, most of the birds do most of their fishing out on the open ocean, dipping or diving at the surface for little fish that got too close to the surface.

And one bird, the Great Frigatebird, does a lot of its feeding in mid-air.

You can see them sometimes at Kilauea Point on Kauai. It divebombs other birds to scare them into dropping the fish they're carrying, then plunges to catch the morsels.

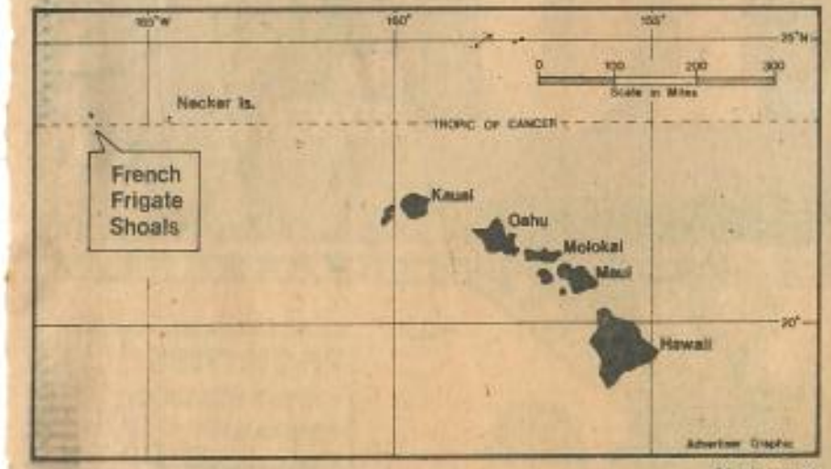
But at Tern during their breeding season, they've got to do most of their own fishing. There just are too many Frigatebirds and too few others by comparison for thievery to fill gullets.

There are three people living on Tern Island. Assistant refuge managers Bob Schulmeister and John Andre, along with Andre's friend, volunteer Ruth Ittner. They stay five months and then take a month off. The plane visits monthly with

See Tern on Page B-2

On this tiny speck of land, the birds make use of every spot they can find. Above, they line up on some old pilings. Right, a Hawaiian Monk Seal basks at the beach.

Advertiser photos by Jan TenBruggencate



Advertiser map

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Advertiser photo by Jan TenBruggencate

Two of Tern Island's millions of winged inhabitants.

Tern Island

Where birds flock by and refuge folks live

jan tenbruggencate
Advertiser Staff Writer

TERN ISLAND, French Frigate Shoal — The lagoon is a shimmering pastel aquamarine against the deep blue of the Pacific that crashes against it in a line of snowy breakers.

In a plane, you can see it from miles away. For the many ships wrecked here, the breakers were all they saw until it was too late to maneuver away.

This, the first lagoon as you head from the main Hawaiian Islands to the Leewards or Northwest Hawaiian Islands, lies in the middle of the Hawaiian Islands National Wildlife Refuge, a string of isolated reefs and rocks and sandspits stretching more than 1,000 miles beyond Kauai and Niihau.

These bits of land, the remnants of volcanic islands like the ones of populated Hawaii, have been recognized as important to the United States for more than 100 years. They've played economic, military, scientific and other roles.

Their biological significance was clear from the time of the first biological survey by Henry Palmer and George C. Munro in 1891. Eleven years later, the U.S. Fish Commission steamer Albatross spent two days at French Frigate on another wildlife survey. And in 1909, President Theodore Roosevelt declared the islands a bird preserve.

It was high time. Collecting of eggs and feathers from seabirds, of skins and blubber of seals, of shells and oil of turtles had wreaked havoc. Introduction of new insects and mammals and plants had altered the environment. Entire species died out on some of the islands.

These specks of land bear little relation to the idyllic isles of the South Seas. Most have little history of human habitation, and shipwrecked sailors haven't been driven to hide out here.

Explorer Jean Francois de la Perouse named the area French Frigates Shoal after his two frigates of exploration, which he nearly put on its reef Nov. 5, 1886. The name has since become French Frigate Shoal or Shoals.

The shoal forms a crescent with its convex side facing east, toward the main islands. The tips of the crescent are 20 miles apart, and lying roughly midway between them is a chunk of volcanic rock, with two 120-foot peaks and a saddle between them. It's 730 feet long and 165 feet thick. There's a smaller rock nearby.

The big one is La Perouse Pinnacle or La Perouse Rock, and the other is Little La Perouse. From the shoal, the rock is a sentinel, miles away but ever present, with its black rock base and its off-white guano-covered top.

Several islands inhabit the surface of the lagoon and they're hardly more than sand banks. One is called Disappearing, because it does from time to time. Two, Whale and Skate, have been Whale-Skate in recent years, since the area between them built up and they were joined. And these days, Little Gin is bigger than nearby Gin.

Tern, one of the bigger ones, gained importance when, in 1942, the Seabees began dredging a channel to it and putting the dredged material on the sand bank. They sank steel plates into

Honolulu Advertiser
Monday, November 9, 1981

thousands pioneer life

the coral to form a large rectangle, 3,100 feet long and 250 feet wide. They graded and packed the surface, and ended up with a runway.

Throughout the 1930s French Frigate's lagoon had served as a waystation for seaplanes during American military maneuvers. In late December 1941, the Japanese captured Wake and secret papers revealing the value of French Frigate, and in March 1942, they used it for a small second attack at Pearl Harbor that failed. The U.S. mined the seaplane runway and made plans for the Tern airstrip.

The Coast Guard installed a Long Range Navigation Station at nearby East Island in 1944. The Loran site was switched to Tern in 1952, some years after the Navy abandoned it. Coast Guard personnel even today, after the Tern station was closed, speak of it as the worst duty station in the Coast Guard.

You might wonder why. The mean temperature is 75 degrees, dropping to the low 70s in winter and up to the high 70s in summer. There's blue Pacific ocean all around, sunny skies, sandy beach.

On the other hand, the nearest humans are 450 miles away on Kauai and Niihau, and you don't have to run very fast to go the length of Tern Island in under four minutes. You can walk the entire circumference in a half-hour or so.

There are a few ironwood trees — introduced — a hala or two and a couple of coconut trees. But they're all pretty weary from the wind and salt air, not to mention the damage of the hundreds of thousands of birds that nest on this little bit of coral. The rest of the vegetation is mainly naupaka and shrub heliotropes, with a half-dozen birds sitting in each.

The smell of fresh and drying guano is everywhere, and it's not uncommon to be splattered by warm guano from any of the thousands of birds constantly wheeling on the thermal updrafts over Tern.

Drinking water is caught on building roofs and from the tennis courts, all of which are liberally splashed with guano. And with 45 inches of rain a year, it doesn't get washed clean often. The water's filtered and chlorinated before it gets to the faucet. It tastes fine.

There weren't many tears among Coast Guardsmen in 1979 when the agency closed its Loran station. And on that day, the U.S. Fish and Wildlife Service, which had been managing the refuge since 1964, put people on the island.

For them, life with the birds and the Hawaiian Monk Seals and the Green Sea Turtle was just fine. At first, the personnel were rotated for a month of civilization every two months, but they complained. They say they're happy with a month off-island after a five-month stint at Tern.

These wildlife observers and protectors may be the first human inhabitants of French Frigate Shoal who are as content with the place as are its natives.

And yet, they don't fit into life on the island in any natural way. Without the cisterns and water-catchment systems, there'd be no fresh water. The danger of ciguatera poisoning is great enough that they don't eat any reef fish.

They must keep generators going constantly to refrigerate food, operate the radio with which they communicate, run the pumps, operate the lights. They're still using the 1979 shipment of diesel fuel and aren't sure how they'll be resupplied when they run out, since the Coast Guard fuel raft that did the last one has been broken up.

The ocean constantly works to break down the man-made walls that hold today's Tern Island together, and a bulldozer-backhoe is in regular use repairing breeches.

The humans are intruders here. They gather information on the seals, but do so hiding behind bushes when possible, so the great mammals aren't frightened away. The island is literally covered with birds, and yet the people must try not to disturb them.

The radio is their vital link with civilization. A twin-engine Beechcraft visits once monthly with the milk, vegetables, mail, generator parts, paint, spark plugs — virtually everything needed to sustain human life.

It's a pioneer life in one sense, but perhaps more appropriately compared to life on a space ship. It's an alien environment for humans, but the view is great.

Los Angeles Times

Crustacean Endangered, Biologists Fear

Eastern Lobster Population Threatened

By LINDA CORMAN, *Boston Globe*

Those lobsters whose tails you have been hungrily snapping off may be costing you very much more before long, experts are warning.

According to many marine biologists, the lobster population is taking a dive and may soon be endangered because of lobstermen trapping the crustaceans before they have had a chance to breed. And, the biologists say, unless a federal law setting the minimum legal lobster size at 3½ inches is passed, the stock will dip dangerously low and send prices out of sight.

Most New England lobstermen staunchly oppose such a law. They question the biologists' predictions and fear economic disaster if a federal minimum were adopted.

States Set Standards

Meanwhile, variations in the industry from state to state and border jealousies increase the difficulty of overcoming many lobstermen's antipathy for change.

Currently, each state sets its own minimum. To determine if a lobster is a "short," lobstermen hook a gauge into the eye socket of their catch. In Maine and Massachusetts, where 85% of East Coast lobsters are caught, the lobster must be thrown back if the 3-by-6 inch gauge extends beyond its back shell.

John Hughes, director of Massachusetts's Lobster Hatchery on Martha's Vineyard, is one biologist who says breed and overall stocks are becoming dangerously low.

Ninety-five percent of the lobsters trapped in Massachusetts have just reached sexual maturity and most of those have never bred, Hughes said. Maine's lobsters do not fare much better, according to Robert Dow, research director of Maine's Department of Marine Resources.

Hughes believes the size of the overall population can be monitored by the amount of lobster caught in each trap. That ratio has declined steadily for nearly a century in New England. In 1889, 225 pounds of lobster were snagged in the average trap. In 1976, the same trap brought in 14 pounds, Hughes said.

While the stocks shrink, demand for lobsters is booming. In 1985, Hughes said, consumers will be scrounging for 40 million more pounds of lobster than fishermen will be able to catch, federal statistics indicate.

In 1978 (the latest year for which complete figures are available), 34.5 million pounds of lobster, worth $65 million, were trapped in the United States. Of this, 19 million pounds were caught in Maine and 9.5 million pounds were caught in Massachusetts.

Maintain Breeding Stock

To fend off a shortage, Hughes has been spearheading a $50,000-a-year state effort to breed and raise lobsters in captivity. Hughes' work has paved the way for several similar commercial efforts, now being planned in the United States and in Canada. But lobster farming alone, even on a large scale, will not ease the pinch, he said.

Raising the minimum size is also necessary to maintain the breeding stock, he said. a 3½-inch minimum would give lobsters a chance to reach sexual maturity and breed at least once, Hughes explained.

Many lobstermen, unimpressed with the biologists' claims, say the lobster population is flourishing.

Edward Blackmore, president of the 800-member Maine Lobstermen's Assn., said the catch-versus-number-of-traps statistics do not prove anything. If hungry lobsters are out there, they'll swim for the bait, regardless of how many traps there are, he reasons.

New Hampshire's lobstermen, who bring in only about 1% of the country's lobsters, see no reason to conform even to Massachusetts' and Maine's current minimums. They have stuck with a 3⅛-inch minimum.

"The biologists don't know what they're talking about," said Robert McDonough, president of the New Hampshire Lobstermen's Assn. "They only get to see a small percentage of what's in the ocean. We see much more than they do. They don't get the feel of it as we do. There are a lot more big lobsters out there than they think."

Dow said the lobstermen are complacent from several years of optimal water temperatures and breeding conditions. But, he and others say, water temperatures are declining and the good years are coming to an end.

What the lobstermen fear is a drop in their catch while they wait for undersized lobsters to grow to legal size.

Although most Massachussetts lobstermen believe the lobster population is in trouble and a 3½-inch minimum is needed, they will not abide by a higher standard unless all other New England lobstermen will.

Marauding Feared

The lobstermen say marauding fishermen from neighboring states would sneak into their waters and make off with undersized lobsters they dutifully threw back. They also believe their neighbors would flood the markets with "shorts" and regulators will fall down on the job of winnowing them.

The matter of size is also reflected in the marketplace, the lobstermen say. They oppose 3½-inch lobsters because they are too large to sell easily. A 3½-inch lobster, which could weigh 1⅛ pounds, is too much for an individual serving, according to Blackmore.

And sharing just won't do. "People want individual lobsters. They don't want anyone picking at theirs with their forks," he said.

Hughes insists a federal minimum-size law is needed to assuage these concerns, adding that he has been "screaming in the dark" for 15 years to get one.

In 1978, a State-Federal Fisheries Management Program recommended states adopt a common 3½-inch minimum. The program was developed by biologists and resource management directors from lobstering states from North Carolina to Maine.

But lobstermen, restaurateurs, and others in the industry raised a storm of opposition and the council backed off.

200-mile zone for trawlers puts adventure in fishing

By Takashi Oka
Christian Science Monitor News Service

KUSHIRO, Hokkaido, Japan — "A fisherman's life these days is pretty thrilling," said the burly crewman in black rubber apron and long boots.

His ship had just come back to Kushiro from 10 days of trawling for pollack in Soviet waters.

"Those Russians restrict our fishing areas so severely that it's almost like being cooped up in a small pond. You know that just outside that invisible line the waters are rich with fish," the fisherman continued.

"So, in the dead of night, with lights doused, we drift into the forbidden area. We let down our lines, trawl furiously, and then make all speed for the permitted area. If we're lucky, by the time the Soviet patrol boats see us, we are peacefully steaming around in the permitted area. So long as they don't actually catch us at it, there's no way they can tell a free pollack from a forbidden one."

The crewman was standing on shore as his ship's winch, mewing and screaming like a seagull, brought a slithering load of pollack up from the ship's hold into an open truck on the quayside.

Inevitably some fish spilled from the truck onto the quay. Using a hooked stick, the crewman flicked each spilled fish back into the truck. In between, out of earshot of his fellow crewmen aboard the ship, he chatted with an inquisitive journalist. "And mind you don't mention my ship's name," he cautioned. "We all do it, but no one likes to talk about it."

At the headquarters of the fishermen's union in downtown Kushiro, Teruo Nakai, secretary-general of the union, acknowledged that some ships violated Soviet restrictions, but said, "It's really the Soviets' fault."

"The United States and Canada set aside certain areas within their 200-mile limit as forbidden areas," he said. "We are allowed to fish anywhere else.

"But the Russians restrict everything except for tiny areas they allot as free areas. With so many of our ships crowded into these areas, obviously they are not going to catch even the quota they are allowed."

The advent of the 200-mile fishing zones four years ago has vastly changed the style of the 100-ton and 350-ton fishing boats home-ported in Kushiro, center of Japan's northern fishing fleet. These ships can go out for a couple of days to catch sardines, or for 10 days in Soviet waters, or for 60 to 70 days in Alaskan and Canadian waters.

"The days when we could go where we pleased and fish as we pleased are gone forever," Nakai said. "Of 195 Hokkaido trawlers, 34 had to go out of business.

"Nowadays, we have to pay to be allowed to fish. We get 1,100,000 tons a year from the American 200-mile zone. For that, we pay license fees running from 3 to 5 percent of the value of the catch. Some Americans, we hear, want to shut us out altogether by raising the license fee so steeply that it will no longer pay for us to keep fishing.

"As for the Russians, we paid them 4 billion yen ($17.4 million) this year to catch 42,500 tons of salmon and trout. But for the pollack, we pay nothing, as the Russians take 650,000 from our 200-mile zone and we take 750,000 tons from theirs. They love our sardines, we love their pollack.

"In Japan, sardines are turned into fertilizer. In the Soviet Union, they can sardines and eat them on bread. Too oily, I say! But pollack and sardines make a fair exchange. Unfortunately, with the Americans there doesn't seem to be anything they want from our waters."

Studying Birds on Nihoa

LAST SUMMER the thousands of birds who ordinarily have the island of Nihoa to themselves were under observation by three human beings.

Two of the intruders, Sheila Conant and Audrey Newman, are now writing reports and analyzing data they collected on the steep 156-acre islet 125 miles northwest of Niihau.

Their three-month scientific study entailed certain hardships that led Conant to say, "I enjoyed it, but after three months I was beginning to feel worn out."

She spent 37 days on Nihoa in the summer of 1980, 22 days in January and February, and wants to return to Nihoa, for a shorter period, to keep track of the birds she color-banded last summer.

Newman said, "Nihoa is one of the hardest islands I ever worked on. The slopes are fragile and real steep, and the birds are nesting everywhere. But it was also beautiful."

Conant is an assistant professor of general science at the University of Hawaii and Newman an ecologist with the U.S. Fish and Wildlife Service. They left

Scientists spent three months on Nihoa studying the thousands of birds there.

May 17 aboard the Townsend Cromwell, research ship of the National Oceanic and Atmospheric Administration, which returned July 18 to bring fresh produce and take Newman off the island. The ship also brought David McCauley, a volunteer, to continue the bird studies that lasted until Aug. 23, when the Cromwell returned.

THE NIHOA STUDIES were part of those conducted as result of the tripartite agreement between the Fish and Wildlife Service, National Marine Fisheries Service, and the state Department of Land and Natural Resources, with the university's Sea Grant program also involved.

Conant's particular interest involved two rare and endemic landbirds, the Nihoa millerbird and Nihoa finch. She took censuses at 90 different spots and samples of vegetation at 40 of the places. She gathered data on the nesting and other aspects of the breeding cycle but said more data are needed.

She found that the finches regularly go halfway across the island but that the millerbirds restrict themselves to quarter-acre areas, although young birds, when they leave the nest, will move a short distance away.

Harry Whitten

She collected droppings for analysis later to determine what the birds eat. She collected seeds of two rare plants and thinks she located all the colonies of the rare plant species.

After three trips, she reported discovery of four new species of insect. A possible fifth species is a large trapdoor spider, related to the tarantula, but she's not sure yet whether it's new or introduced.

She took weekly censuses of monk seals, 17 being the maximum seen but she's sure there were more. Two of the seals were pups, one being born shortly after she and Newman arrived on the island. She also kept a record of green sea turtles.

THE FISH and Wildlife Service has asked her to write up a long-term management plan for Nihoa. Her major recommendation will be that accidental introduction of other organisms should be prevented. In particular, she hopes rats or other insects don't get to the island.

Newman's task was to study the seabirds, of which there are hundreds of thousands, to develop monitoring techniques and methods for assessing long-term effects on bird population of prospective commercial fisheries.

Of the 17 species of seabirds on Nihoa, 15 were nesting, she said. She gathered data on time of nesting for 13 species, but two species, black noddy and white tern, nested on cliffs too precipitous to reach.

She did a more intensive study of three species, Bulwer's petrel, masked booby and red-footed booby. She said that more than 90 percent of the Bulwer's petrels in the Hawaiian Islands nest on Nihoa but very little is known about them.

She weighed them, banded them, and gathered data on how long the eggs incubate, and how fast the chicks grow. She found that a bird sits on the egg for 10 days usually, without eating or drinking, before the mate comes to take over the task.

SHE CONDUCTED similar breeding biology studies on the masked and red-footed boobies. Other persons in the tripartite study gathered similar data on the birds on Laysan, Kure, Kauai and Tern Island in the French Frigate Shoals.

After she left, Conant and McCauley continued the seabird studies.

All the drinking water for the researchers arrived on the Cromwell, as did the canned goods, freeze-dried foods, rice and noodles they ate and fresh produce that lasted a short time.

They bathed in salt water but collected fresh water from seeps to wash off the salt. There were quite a few flies, and ticks were a nuisance at first but not as bad later, Conant said.

After three months, she began to feel the strain caused by constant exposure to wind and sun, as well as the necessity to climb up or downhill for every task on the steep island.

Peterson

RUSSELL PETERSON, president of the National Audubon Society, and his wife Lillian did add to their lifelist of birds while here a week ago.

In company with Conant and Rob Shallenberger, of the Hawaii Audubon Society, they saw three endangered waterbirds, the Hawaiian stilt, coot and gallinule, as well as an 'elepaio, white tern, and other birds they had not previously seen.

Solidarity Walk

ENVIRONMENTAL groups are among those sponsoring the solidarity walk and rally Saturday to protest budget cuts for social programs, environmental protection, parks and wildlife.

The rally will meet at 10 a.m. at the Federal Building and walk to the State Capitol at 11 a.m. It is sponsored by the Hawaii Coalition on the Federal Budget, a group of 50 organizations with Patsy T. Mink and John Radcliffe as co-chairmen.

The sponsors point to cuts in funds for Environmental Protection Agency research, solar and energy conservation technologies, mass transit, natural resource protection programs, wildlife refuges and elimination of the Young Adult and Youth Conservation Corps.

They also suggest that some of the surplus funds collected by the state be used for programs hit by federal budget cuts.

Message: too much

Residents also call for more jobs and

By Gerry Keir
Advertiser City Editor

• Slow down Hawaii's population growth.

• Work harder to curb crime.

• Create more jobs, even if it means changing our Island lifestyle.

• Try to build agriculture, aquaculture and fishing instead of relying so much on tourism for Hawaii's economy.

• Keep farmlands green unless, by taking some land out of farming, you can build houses we can afford.

Those are some of the messages we residents sent to our state government in a new public opinion survey conducted here.

The statewide poll is the third in a five-year series of "State Plan Surveys" designed to give government a better idea of public sentiments as it tries to steer the ship of state and plan for Hawaii's future.

The new survey was conducted in February and March, when the SMS Research Inc. firm of Honolulu questioned 1,615 residents statewide. In general, it confirmed findings of earlier polls on the same subjects sponsored by the state.

Here are the conclusions in the major areas of the poll:

Population growth.

"Concern over population growth in Hawaii has remained and has even strengthened somewhat," the survey report says. "Some 72 percent of the respondents in this survey would like to see population growth for the state slow down."

The findings are based on this central question:

". . . How fast do you think population in Hawaii should increase over the next 10 years?

Faster	6%
Same rate as now	20%
Slower	51%
No growth	20%
No opinion	2%

Support for slow-growth or no-growth was 61 percent five years ago; 71 percent now. And this group is a majority on all islands — ranging from 54 percent in Hawaii County to 74 percent on Oahu.

Tourism.

There is widespread appreciation of the economic benefits of tourism, but most of us feel the state should try to make sure it doesn't have all its eggs in the tourism basket in the future.

"A majority of Hawaii residents would prefer to develop other major industries . . . rather than continue to rely on tourism so much," the survey report says.

"At one and the same time, the residents of Hawaii realize the importance of the tourist industry in providing jobs for our residents, but are concerned about being completely dependent on tourism for our economic prosperity."

The findings are based in part on this question and its response:

"Over the next 20 years, do you think we should continue to support and promote tourism as a major industry in Hawaii, or do you think we should try to develop other major industries instead and not rely on tourism so much?"

Support tourism	41%
Develop other industries	56%
No opinion	3%

Further exploratory questioning by the pollsters revealed that "in the minds of the public, the question of the extent to which we should rely on tourism is primarily economic . . . and the public's feelings are governed by their perceptions of the jobs and revenues (tourism) would provide.

"It should be noted that many of the possible social consequences of tourism development appear to be somewhat less important to Hawaii residents," the survey report added.

For instance, when people were asked why they favor diversified industry over tourism, most agreed with such reasons as "it's bad to depend on just one industry" or "tourism has too many ups and downs."

The potential negative impacts of tourism — overdevelopment, "encourages crime," makes it harder for residents to use beaches — were mentioned by fewer people.

Diversified economy.

Well, if we're going to get away from a one-industry economy, what should the state government promote? These were the most popular choices in the survey:

Agriculture (such as papayas, flowers, taro, macadamia nuts);

growth, crime

less reliance on tourism

scientific research; aquaculture; and fishing.

Scientific research was especially favored on Oahu. Agriculture was the most popular choice on each Neighbor Island and No. 2 on the Oahu list.

Some other well-publicized choices — manganese nodule processing, regional headquarters for international corporations, movie production — finished well down the list within each county.

Oahu vs. Neighbor Islands.

"If you had to choose, would you prefer additional businesses and economic growth to be located on the Neighbor Islands or on Oahu?"

Neighbor Islands	67%
Oahu	29%
No opinion	4%

Obviously, the outcome is decidedly one-sided. On the Neighbor Islands themselves, the issue is even more lopsided — majorities ranging from 73 percent on Kauai to 81 percent on the Big Island want economic growth to be pushed into rural Hawaii, not the big city on Oahu.

Why? They want jobs and an improved economic base. And people on Oahu think it's a good idea because they say it would limit crowding on this island.

On the other hand, the minority that wants growth centered on Oahu say this course would have the advantage of avoiding changes to Neighbor Island lifestyles and preserving open space on these islands.

The hard choices.

What happens when two desirable goals run head-on into one another? The state survey tried to find out, asking people to choose between several A vs. B alternatives.

Respondents were asked: "Sometimes it is hard for a community to get everything it wants. For each two things I mention, tell me which one is more important to you."

Choice 1.	
Lower housing costs	60%
Preserving farm land	36%
No choice	4%

"It is likely that residents will accept some loss of agricultural land for affordable housing," the survey report said. "However, use of the land for expensive developments beyond the reach of most Hawaii residents is likely to be resisted."

Choice 2.	
Water for agriculture	59%
Water for new housing	35%
No choice	6%
Choice 3.	
Having plenty of jobs	56%
Preserving our island ways and lifestyle	37%
No choice	7%

State services.

The state government gets mixed grades for the job it has done in various areas over the past decade.

For instance, the pollsters said, people generally gave the state good marks for providing for the social

See The message on Page A-4

honolulu calendar

August 1981

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The Advertiser regrets that notices cannot be accepted by telephone.

Send to Honolulu Calendar, The Advertiser, P.O. Box 3110, Honolulu, 96802.

The message: less crime, growth

from page one

educational and recreational needs of Hawaii's citizens and preserving the environment.

But people are less satisfied with the job being done in providing jobs and affordable housing; in controlling population growth; in reaching energy self-sufficiency.

Most everybody's No. 1 problem area is crime — and that's where most people think the state has fallen down on the job worst of all. Nearly eight out of 10 respondents said there has been little or no progress in the fight against crime over the past 10 years.

Not surprisingly, the areas where people say progress has lagged are the ones they'd like to see the state "give the most attention to over the next few years" — crime protection, housing, better schools, more jobs.

The poll was was sponsored and paid for by the state Department of Planning and Economic Development. The survey was carried out by SMS Research Inc. of Honolulu.

SMS interviewers contacted 1,615 residents around the state in their homes in February and March of this year. There were more interviews than usual carried out on Neighbor Islands in order to provide reliable results for each county, but all statewide totals were then "weighted" so that each island's residents represented the proper share of the statewide average.

Since these survey results are based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken — that is, if each state resident had been asked the same questions.

The extent of possible error in a sample survey can be estimated by statistical formulas. The margin of error for figures from each county in this survey is 5 percent. That means there is only a slim chance that the overall results differ by more than 5 percentage points from the results that would be obtained if a complete census were taken within each county.

Also, any survey carries within it risks of "non-sampling" error caused by such factors as people who decline to participate in the poll or who cannot be reached.

A-10

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George Chaplin — *Editor-in-Chief*
Buck Buchwach — *Executive Editor*
John Griffin — *Editorial Page Editor*
Mike Middlesworth — *Managing Editor*

Tuesday, September 1, 1981

Hawaii's public priorities

No doubt the best-read story among politicians in Sunday's paper was an Advertiser report on a state-commissioned but privately conducted public opinion poll. It dealt with the priority concerns of Hawaii residents on major issues.

If it produced nothing dramatically new, the poll did show how voters choose between some conflicting goals, and that they have mixed views on how the state government is dealing with the issues.

HERE ARE some points we drew from the survey:

- Hawaii's people want slower growth, but they also want the kind of development that will provide jobs and lower-cost housing for our people, even at times at the expense of island lifestyles and the taking of agricultural land.
- Many appreciate the economic benefits of tourism, but most also want to diversify the economy in much-discussed ways ranging from agriculture to aquaculture to scientific research to fishing.
- Large majorities on all islands want additional business and economic growth located on Neighbor Islands rather than Oahu.

and developing alternate energy resources. On that, he is right that some efforts are not appreciated enough.

On crime, the number one problem where the state gets low marks, it might be noted this survey was taken in February and March. That's before the reported dramatic drops in crime statistics and similar after new government anti-crime efforts were launched. So there is reason to wonder how large the crime issue will loom in the gubernatorial election next year.

At the same time, there are questions on how the economic issues will play next year, especially if the Reagan economic program doesn't catch hold and unemployment and inflation remain high nationally while states and local governments are hit by the impact of federal budget cuts.

THOSE ARE controversial findings for many people. They can, for example, be read as a license for more poorly planned, low-quality development in the name of needed jobs and housing.

Some will note economic studies that have said only tourism can provide the jobs needed for the growing numbers of our young people. There are also those who feel strongly that rural and Neighbor Island lifestyles must be preserved above all else.

More than anything, however, the findings show some of the contradictions that face our public officials and our people. Obviously, some tradeoffs and compromises will have to be made.

But there is also the potential for imaginative solutions, and one value of such a survey is that it should stimulate public thinking and ideas.

GOVERNOR ARIYOSHI is not happy with the mixed grades the state government gets in dealing with some issues.

The private survey (by the same firm that does the Advertiser's Hawaii Poll) was aimed at issues of most concern to the state administration, and the governor feels he has given high priority to economic diversification, controlled growth,

PART OF THE Ariyoshi administration problem may be an old one — a weakness in communicating its goals and its accomplishments to the public.

But part may also be the basic contradictions Hawaii faces, the conflicts of goals mirrored in this survey. It is not an easy situation.

Some of the answer lies in more public realization and debate on the issues. And part would also seem to lie in the State Plan process, another under-appreciated effort of the Ariyoshi administration.

That is simply an effort to have the state lay out its goals, objectives and priorities for the future. The first step was taken in 1978 with adoption of the generalized State Plan.

But the Legislature has lagged badly on the second step, adoption of follow-up "functional plans" in 12 specific areas such as agriculture, tourism, education, etc.

AGAIN, THERE ARE, and will always be, conflicts between desirable goals in such functional plans, just as there are conflicts between rights in our Constitution and legitimate interests in our various laws.

In this case, the need is not to engrave plans in stone, free of all conflicts. That is impossible. It is to lay out Hawaii's vital interests, see where they mesh and where they overlap, and to get to work on where we want to go while minimizing the differences.

Doing that next session could be a major contribution by the Legislature.

Friday, August 14, 19... Honolulu Star-Bulletin A-15

UH Researcher Cites Lobster Fishing Perils

By Harry Whitten
Star-Bulletin Writer

The lobster fishery in the Northwestern Hawaiian Islands may require fishery management measures to assure its future, according to a researcher who has been studying lobster biology for several years.

Craig MacDonald, of the University of Hawaii's zoology department, said a problem may arise from the practices involved in capturing and releasing egg-bearing and sublegal-sized lobsters.

Under state regulations, sublegal-sized lobsters are those with carapace lengths less than 3.3 inches. Under the proposed federal fishery management plan, which is expected to go into effect later this year, lobsters with carapace lengths less than 3.1 inches would be sublegal size.

The carapace length is the length of the hard protective covering over the head and body of the lobster to the base of its tail.

CURRENT STATE rules require that fishermen release undersized and egg-bearing lobsters back into the water so that they can contribute to the fishery's reproductive stock.

However, the rules do not require that fishermen release their illegal catches at the place of capture. If released elsewhere, the lobsters may be put in habitats where they cannot easily survive or where they may grow more slowly, MacDonald said.

When egg-bearing and undersized lobsters are caught in traps, they are exposed to possible injury during both capture and release, MacDonald said the loss of these lobsters through injury could affect the long-range productivity of the lobster fishery.

Rough handling on deck also increases the risk of injury, he said, and injured lobsters may face increased risks from predation after they are released into the water.

Fishermen will serve their self interests by releasing illegal lobsters at point of capture, he said.

Fishing may become big

By Gordon Sakamoto

HONOLULU (UPI)—By the year 2000, fishing will be one of Hawaii's top industries, rivaling pineapple in overall annual income.

Despite being in the middle of one of the richest fishing grounds in the world, the industry until recently showed little progress in the last 50 years.

According to the National Marine Fisheries Service statistics, Hawaii's fish catch has remained virtually unchanged over the years. In 1928, for instance, Hawaii fishermen landed 11.6 million pounds of fish. In 1978, the catch was 12.8 million pounds.

In terms of gross state product, the industry has a whole accounted for less than 1 percent last year.

All of that is changing. With some federal aid and an all-out effort by the state to remove constraints that have hampered growth, an upward movement has been detected.

"The industry is moving and it's going through a very rapid growth phase," said Stanley Swerdloff, manager of the fisheries development program for the state. "We've seen a dramatic increase in licensed commercial fisherman — up to more than 4,000. Two years ago, the number was under 2,000 and as recently as 1966, there were only 700 commercial fishermen statewide.

"We're also seeing a dramatic increase in the number of boats — new big distant water vessels."

And more importantly, according to Swerdloff, the growth base for all of it is in Hawaii.

"It's not West Coast crews coming in and taking off," he said. "It's a Hawaii operation. It's local crews contracted to local processors and buyers. Also encouraging is that young people are getting into the business and they seem to be doing very well.

"In other words, it's money earned in the state staying in the state."

The potential for earnings growth is tremendous.

"The estimates of fisheries resource potential within the Hawaiian region (which extends 1,500 miles northwest to Midway Island. The North Pacific and to the Equator) range from 74 million to 117.5 million pounds per year," he said. "This represents an additional harvest of 60.7 to

state industry

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104.1 million pounds per year."

Translated into dollar figures, the processed value of the catch is projected for $62 million by 1990 and $107 million by the year 2000 — a value roughly equivalent to 70 percent of the state's third leading moneymaker, pineapple.

"However, we're still scratching the surface," said Swerdloff. "We've still got a long way to go."

A state-commissioned study completed last year confirmed Swerdloff's contention.

"Hawaii's historic identification with the sea has not been matched by commercial utilization of ocean resources," the report said. "To a great extend, state, county and federal programs aimed at increasing the utilization of fisheries resources have been uncoordinated and lacked continuity."

Resources are abundant, but to tap them for local consumption and export, more modern long-range vessels must be built, and, in addition, more dock space, infrastructure to service the expanded activity, reliable supplies of hardy baitfish, financing, marketing services, new technology and continued research must be provided.

The state, said Swerdloff, has moved in several areas to pull everything together.

It was a loan program for vessel purchases, results of a new baitfish development program look promising and removal of the excise fuel tax is being seriously considered.

HIBT Keeps Kona Going

By Jack Wyatt
Special to the Star-Bulletin

A sign in a deserted Kailua-Kona souvenir shop during last week's Hawaiian International Billfish Tournament read "Trying to Stay in Business Sale", while a note at another Alii Drive store made a desperate plea to all buyers—the smokers, the eaters, and even those without shoes—to please come in.

At a time of year when the sleepy village of Kailua should have been alive with people spending money, many shops were void of buyers while some stores were closed for good.

Just what do Kona's big game fishing, and billfish tournaments in particular, do for Kailua's economy? Ask the clerks in the many deserted shops and he, or she, will probably answer, "very little."

It's true that for many of Kailua's smaller, and somewhat tackier shops, the billfish tournament's free-spending big game fishermen have passed them by, but for Kailua's more exclusive and expensive stores, its leading restaurants, and its hotels closest to the town's popular fishing pier, tournaments like the prestigious HIBT became their Christmas in July.

"WHEN TOURISM WAS UP and times were good, everyone was busy making money and it was difficult to say exactly where the people came from," explained Gordon Bartsch, past president of the Kona Chamber of Commerce and owner of Kailua's Pottery Steakhouse.

"But now," he added sadly, "with slowdown in the economy it's pretty easy to pin-point the source of business. Fishing tournaments, like the HIBT International and the popular Kona Gold Jackpot, have proven very important to all of us."

According Hugo and Shirley von Platen, owners of Huggo's Restaurant of Kona, the difference between no tournament and a big contest like the HIBT is approximately $1,000 to $1,500 a day in dining room sales.

"Fishing tournaments help everyone," said von Platen, who, with his wife, own the plush 36-foot sports fishing boat Chiripa.

VON PLATEN ESTIMATES that some sports fishermen spend $1,000 to $2,000 a day without even a shrug.

Do state and county governments appreciate Kona's sports fishing industry? Some say no. "At times I feel that we're (the sport fishing industry) treated rather shabbily—sort of a poor stepchild," said Capt. Jack Fischer, a Kailua-Kona charter boat skipper and HIBT official.

"Here we are, fighting soaring fuel and maintenance costs, struggling to eke out a living with our charter boats," he said, "and what do we get? An unimproved harbor, too small to accommodate those many boat owners wanting to use it, and an administration that is looking at ways to take a percentage of our gross earnings. Without sport fishing, Kailua-Kona would be in big trouble."

Surprisingly, neither the state, the county, or the Hawaii Visitors Bureau has a handle on how much Kona's sport fishing industry is worth to Hawaii. Jim Sutherland, the HIBT's executive secretary, claims that his tournament is worth $2.5 million to the Big Island's economy, but some people feel that may be on the high side.

Marlin keeps Kailua-Kona going

"WHEN YOU CONSIDER $90,000 in entry fees, $82,000 in charter boat costs, plus, hotels, meals, transportation and entertainment charges," said Jan Selland, a Hawaii County researcher, "Mr. Sutherland's figure comes very close.

"Because of our lack of big beautiful beaches," said Bud Hunt, manager of Don Drysdale's Club 53 restaurant and bar, "Kona has to offer something different than Maui or Kauai. Having the world's finest marlin fishing grounds is our biggest asset."

Jim Rizzuto, a big game fishing authority from Hawaii's Waimea district, says that despite inadequate harbor facilities, high costs of operation, and a very competitive market, Kailua-Kona's charter boat fleet is one of the finest in the world.

"Kona has approximately 50 first-class charter boats costing between $75,000 to $500,000 each," he explained. "Tournaments such as the HIBT and other events afford these skippers an opportunity of keep their boats active for a week or more. And best of all, most of the charter fees stay in the community and filter down to almost everyone."

Although Kailua-Kona has its share of cut-rate operators, most Kona charter boat skippers charge $375 a day for exclusive use of their boat, or $250 for the half-day. "Because of rising costs, that fee will probably increase to over $400 a day soon," said skipper Fischer. "Hell, diesel fuel costs us $1.23 a gallon and I hear it's going up soon. What else bad can happen?"

How about an air traffic controllers strike, Capt. Fischer?

How important is the HIBT to Big Island's tourism? Two major Kona hotels, which were estimated to have a 40 to 60 percent occupancy rate prior to the HIBT, were sold out during last week's tournament.

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but for How Long?

Marlin's Future a Concern

THE 23rd annual Hawaiian International Billfish Tournament in Kailua-Kona was a rousing success with 89 marlin totalling 18,485 pounds boated during the five days of fishing. An even more amazing statistic is that 56 of the 66 teams caught a fish, an 84.8 percent success story. It takes 51 weeks to plan that one week of activity and the HIBT officials are already at work planning for next year's tournament.

Trouble is, will there be enough marlin in the blue Pacific waters to insure that the HIBT, the World Series of Billfishing, can continue for another 23 years?

There is concern among all those connected with the tournament—from HIBT officials to the anglers from 19 countries and islands of the sea and to the Kona charterboat skippers—that marlin is like every other natural resource. It is possible to deplete it.

But before you jump the gun and say why not stop sports fishing tournaments—such as the HIBT—as the first step, consider another eye-opening statistic: Only 1.3 percent of all marlin reportedly caught were boated in Hawaii's Federal Conservation Zone waters. The other 98.7 percent were caught outside of the FCZ area 400 miles wide and 1,500 miles long.

THE MARLIN'S DEADLIEST enemy isn't the sports fisherman or charterboat skipper. It is the longlining method of fishing, employed mostly by foreign vessels—namely the Japanese. (Taiwan and South Korea are also gaining ground.)

The Western Pacific Regional Fishery Management Council, chaired by State Sen. Wadsworth Yee (R-6th District), met in Kailua-Kona in conjunction with the billfish tournament to bring up that very issue. However, it carefully made no reference to Japan, the biggest offender, simply stating the issue "how to keep Pacific Blue Marlin as a resource for Hawaiian fishermen as against allowing *foreign* longline vessels to continue to take the major portion of the catch for consumption overseas."

Apparently, five years of study and effort by the FMC were shot down by the State Department's and Commerce Department's reply to the request for federal clout to keep Hawaii's waters for Hawaiian fishermen.

A reply to the effect that the council shouldn't "rock the boat" by discouraging foreign vessels from fishing Hawaii's FCZ with longlining prompted one person at the public hearing to remark: "If I didn't see the U.S. Department's letterhead I would have wondered what country it was representing."

WELL-KNOWN KONA SKIPPER George Parker, whose No. 3 son Marlin (yep, named after the billfish) won top charter boat captain honors, calls longlining a "very deadly gear."

How deadly? Consider this.

In the HIBT there were 66 boats fishing each day with an average of four lines to a boat, a hook and lure on each line. That's a total of 264 hooks trolling the waters off the Kona Coast for eight hours for five days.

In contrast, one longline mother (not an editorial opinion) vessel can put 2,000 to 3,000 hooks on a 15-mile longline for 24 hours a day. And there are an estimated dozen longline vessels fishing the Western Pacific waters, meaning that there are 25,000 hooks a day out there trying to snag the marlin even before it can reach Hawaii's off-shore waters. No wonder local skippers such as Parker speak emotionally on the subject.

Clearly, sports fishing in comparison with that of longlining is an extremely inefficient way of catching fish.

ACCORDING TO FMC reports, about 40 percent of the longline catches are marlin because that method is nonselective. But what disturbs the billfish people more is that the marlin is now a targeted species for longliners out primarily, but not necessarily, for tuna.

What compounds the marlin problem is that it is considered a highly migratory species like the tuna and therefore not bound by regulations since it is not considered the province of one particular country. One reason why the United States does not want any restriction on tuna

Bill Kwon

fishing is because of the U.S. Tuna Association, a strong lobby group that doesn't want to be barred from restricted zones of other fishing and coastal nations. That bit of strategy apparently has backfired since all countries except for Japan have included the tuna in their regulations.

This means the United States is unable to control *any* foreign fishermen within its FCZ if they claim to be fishing for tuna and they can fish to within 12 miles from shore if they use pole and line. But in their longlining bid within the 200-mile area to get the tuna, the marlin also get caught.

It's a Catch 22 that catches the marlin.

What can people do?

"Make a big stink," said one local skipper.

"PEOPLE DON'T REALIZE that commercial fishing here is a big industry, even bigger than the papaya industry," said Mel Makaiwa, who now lives in American Samoa and works for a tuna packing company there.

"Write to their congressmen," says Sen. Yee, who knows both the power of vociferous constituents and the democratic process even if it can get bogged down with bureaucracy at times.

"Domestically, we are trying to protect our interests," said Yee, "but the State Department because of national interests wants us to reach a voluntary agreement with foreign countries in the use of longline gear.

"It is a delicate issue. A regulation on fishing is like a regulation on automobiles. The State Department has to look at it as part of a bigger picture," Yee said. "But the council feels strongly that it is an important issue, one with a strong economic factor to the state."

Mauna Kea Campaign

THE CAMPAIGN to get rid of feral (wild) sheep and goats on the Big Island's Mauna Kea is going well, with an all-out effort now under way to eradicate the last of them by the end of the month, according to Ronald L. Walker, wildlife branch chief in the state Division of Forestry and Wildlife.

The state is under order from U.S. District Judge Samuel P. King to remove the animals by Aug. 1 because they were destroying the mamane-naio forest, sole habitat of the palila, an endangered bird species. King's ruling was based on the federal Endangered Species Act.

Walker said that as of the end of June an estimated 150 sheep and 25 goats were still on the mountain and that a number have since been killed.

This compares with an estimated 40,000 sheep on the mountain in 1934 and an estimated 1,700 there in 1980 when the eradication campaign got under way.

Hunting started June 7, 1980, with private hunters encouraged to get their animals. By last month, however, hunting pressure had declined, Walker said, because the animals had become so scarce they were hard to find.

The campaign to eradicate the last feral sheep and goats on Mauna Kea faces an Aug. 1 deadline.

At that time, staff employees were called in to try to get the last of the animals, although the mountain is still open on weekends for sheep and goat hunters.

AN EXPLANATION of why the palila's existence is precarious is given by Charles van Riper III, who made an intensive study of the bird from 1970 through 1975 while working for his doctorate. He has written a scientific report of his studies for *Ibis*, a publication of the British Ornithologists' Union.

No single mechanism was alone responsible for the palila's plight, van Riper said, but a number of factors had a cumulative effect.

"The primary reason for the endangered status of this bird appears to be the effect of habitat alteration upon a specialist, coupled with the fact that the small effective breeding population and low dispersability of the species may have resulted in decreased genetic fitness," he said.

Probably of greatest importance, he said, was the fact that the palila had evolved into a rather specialized niche, becoming totally reliant upon the mamane ecosystem.

"Mamane is the major tree chosen for nest sites and also provides its principal source of food," he said. "... Thus we see that the palila's ecological niche in a way predetermined low numbers."

Problems for the bird did not begin until man and feral animals had significantly altered the habitat, he said, referring to a steady decline in mamane forests since 1850.

HE SAID the bird now occupies only 10 percent of its former range and that this area is diminishing rapidly.

Van Riper said the present population of palila is estimated as being between 1,500 and 1,700 individuals. The hope is that removal of sheep and goats will save what's left of the mamane forest and thus permit the palila to survive.

For that matter, there are other reasons for saving the forest — a forest looks better than a bare slope and forests help prevent erosion.

Forests

HULTON B. WOOD of the Institute of Pacific Islands Forestry has furnished me with additional published material on how men have affected climate.

The *Sandwich Islands' Monthly Magazine* of February 1856 had an article, "The Influence of the Cattle on the Climate of Waimea and Kawaihae, Hawaii," which said that many persons then living remembered when the Waimea plains were covered with woods to the edge of the slope.

"Where now hardly a tree is to be seen for miles, we were informed by an old resident that 25 years ago he lost himself with his team in the woods," the article said.

Cattle introduced by Capt. George Vancouver in 1793 increased rapidly, destroyed the forest, and this, in turn, lessened the difference in temperature and moisture of the conflicting currents of air, the article said.

The result was a moderating of the mumuku, the tremendous gusts of wind that swept down the slope toward Kawaihae from the Waimea plains, the article said.

"Indeed, we seem to have at Waimea and Kawaihae a remarkably compact example, a cabinet specimen as it were, of the mutual action and reaction on each other, of earth, air, sea, men, animals and plants."

The relationship between forests and water was discussed by Colin G. Lennox, former chairman of the Territorial Board of Agriculture and Forestry, in an article written in 1948.

He related some history, such as King Louis VI of France proclaiming an ordinance in 1215 to protect forest stands as a means of preventing avalanches.

He said the Japanese as early as 1683 established a reforestation program for mountain areas as a means of controlling torrents and preventing erosion.

In the United States, in 1799, Noah Webster presented a paper in which he attributed changes in weather to forest effects and the removal of forests from certain areas.

Sea Routes

OIL TANKERS have been advised that the Northwestern Hawaiian Islands are "areas to be avoided," according to word sent by the U.S. Coast Guard to George H. Balazs, Hawaii Institute of Marine Biology.

Balazs has done much research on the endangered sea turtle and is also much concerned about sea birds, which could be harmed by oil spills.

The Coast Guard said the prohibition is voluntary but that the oil industry is expected to comply as it is in its best interest. Also, the normal tanker routes are outside the "area to be avoided."

The area extends 50 miles around the following land masses: Pearl and Hermes Reef, Lisianski Island, Laysan Island, Maro Reef, Gardner Pinnacles, French Frigate Shoals, Necker Island, and Nihoa.

Balazs, who is also president of the Hawaii Audubon Society, expressed regret that Kure Island was not on the list.

Birds

THE NEW third edition of the Hawaii Audubon Society's field guide, "Hawaii's Birds," is now available.

The new front cover has a picture of a gallinule and the back cover of a Laysan albatross, both photographed by Robert Shallenberger, former society president, who did much work in preparing the new edition.

Some of the paintings and photographs have been changed from previous editions, and some of the information on bird species has been updated.

The guide may be obtained from book stores or from the Hawaii Audubon Society, P.O. Box 22832, Honolulu, Hawaii 96822. The price is $3.95 each plus postage (70 cents book rate locally or by ship to Mainland or $1.03 first class by air) plus 16 cents excise tax.

Printing was by SB Printers.

U.S. May Keep Boat

The U.S. attorney's office said today that it is moving ahead with forfeiture proceedings against a Taiwan fishing boat caught in American territorial fishing waters off Kure atoll April 21.

But Elliot Enoki, assistant U.S. attorney, said it is too early to tell if the boat — No. 3 Yang Tong — now docked in Honolulu Harbor, eventually will be put on the auction block.

In most seizure cases involving foreign fishing vessels caught within the 200-mile limit off an American territory the boat owners pay a fine and get their vessel back. But sometimes the U.S. government keeps the boat in lieu of payment and then sells it.

MEANWHILE, the 19 Taiwanese crewmen, who do not have passports or visas, spent most of last night trying to find a place to sleep or air transportation home.

After the fishermen arrived here Saturday under escort by the Coast Guard, they were given a place to sleep in the annex of the Oahu Community Correctional Center.

But U.S. Marshal James Propotnick said there is no legal reason to detain the fishermen any longer.

He said that Jimmy Ching, a mechanic for American Pacific Transport Co. Ltd., turned good samaritan late night and arranged for the fishermen to be picked up in several rental cars.

Today the transport firm said Ching was out of the office helping the fishermen and no information was available on their whereabouts.

A-2 Honolulu Star-Bulletin Tuesday, May 5, 1981

Taiwanese Sue to Regain Seized Boat

By Jim McCoy
Star-Bulletin Writer

The owners of the Taiwanese vessel seized by the U.S. Coast Guard last month for illegally fishing off Kure Atoll yesterday filed a lawsuit in federal court seeking return of the vessel plus damages.

But government authorities yesterday said the vessel was seized because it was illegally "coral-dragging" to harvest semiprecious pink coral inside the 200-mile limit set by the federal Fishery Conservation and Management Act of 1976.

The owner, Tong Shing Co. of Pen Hu, Taiwan, claims in the lawsuit that the U.S. government "has wrongfully and unlawfully deprived" it of possession of the Yang Tong No. 3.

The lawsuit said the company "has not violated any statute of the U.S." It asked for the immediate return of the vessel, plus damages for "the wrongful seizure and arrest."

The attorney representing the vessel's owner, Roy M. Kodani, denied the charge that the Yang Tong was "coral-dragging" inside the 200-mile limit.

CORAL-DRAGGING, considered by environmentalists to be a destructive fishing technique, involves dragging large rocks attached to cables through a bed of living coral. After the bed is dragged, a net is lowered to pick up the dislodged pieces of coral. Often, the end result of coral-dragging is that the coral bed dies.

"It's like fishing with dynamite, where you kill 1,000 fish but catch only 10," said U.S. Marshal James Propotnick, whose office has custody of the Yang Tong.

Another way to obtain coral is to send divers down to the coral bed to chip the coral away. This method is far less destructive, but far more time consuming.

Coral-dragging is legal outside the protected 200-mile limit, but illegal inside the limit because it constitutes "fishing" for the live coral.

Propotnick said coral-dragging equipment and 600 pounds of semiprecious pink coral were found aboard the Yang Tong when it was seized by the Coast Guard April 22 in waters 1,650 miles west of Honolulu. The Yang Tong was 165 miles northwest of Kure Atoll, which is part of the Hawaiian chain.

The equipment and coral remain aboard the 92-foot vessel, which now sits at the Coast Guard's Sand Island station awaiting government forfeiture action.

A complaint filed against the vessel by assistant U.S. attorney Elliot Enoki seeking forfeiture of the vessel said the Yang Tong was fishing inside the 200-mile limit.

THE COMPLAINT ALSO said that crewmen aboard the Coast Guard cutter Point Harris saw no "Day Shapes" signals, or flags, which would signify that a ship is "engaged in trolling." The Point Harris was the ship that seized the Yang Tong and accompanied its crew of 19 to Honolulu after a stop in Midway.

The Taiwanese crewmen have been released and are staying in a Kalihi apartment. They speak no English, have no money and are anxious to return to Taiwan aboard their vessel. The crew comes from the small village of Pen Hu, located on a small island in the Pescadores, about 30 miles off the coast of Taiwan.

"The village of Pen Hu has a lot riding on this ship," Kodani said. He said one person put up some money and others in the 4,000-member village contributed to purchase the Yang Tong.

Kodani said the reason the vessel was within the 200-mile limit was because the radio operator fell ill with severe stomach pains, and the captain decided to head for Midway for medical treatment. On the way, the fuel system failed, causing the vessel to drift for about five days, Kodani said. It was after it drifted within the 200-mile limit that the Coast Guard seized it, he said.

Kodani added that the crew was grateful to members of the Hawaii community who have donated food and housing to the crew. "All they want is to go home as soon as possible," Kodani said.

The only other vessel seized in Hawaiian waters since the 1976 fisheries act was the Japanese fishing trawler Koshin Maru No. 21. The Coast Guard stopped the 160-foot vessel in May 1978 off Kure Atoll for fishing without a permit.

As in the present case, the U.S. attorney's office filed a suit seeking forfeiture of the ship once it was brought to Honolulu. The owner of the vessel, Maru Watarai Shoten Co. Ltd., settled the case by agreeing to pay a $50,000 out-of-court settlement.

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Stranded Taiwan crewmen rescued from courtyard

The 19 Taiwanese crewmembers of the Yang Tong III appeared to be in a fix last night.

As darkness fell and rain spotted the sidewalk, the crew — some as young as 17 — faced a hungry night in the breezeway of the Prince Kuhio Federal Building.

Their troubles started when the Yang Tong was seized by the Coast Guard April 21 in the vicinity of Kure, 1,750 miles northwest of Honolulu at the far end of the Hawaiian Island chain.

The Taiwanese boat, loaded with coral, was inside the 200-mile U.S. fishing limit and was breaking the law, the Coast Guard says.

A cutter escorted the boat to Honolulu Sunday. The crew, none of whom speak English, were turned over to the U.S. Immigration and Naturalization Service, which arranged a night's accommodations at state corrections facilities.

No criminal charges were filed against the crew, however. And yesterday they were turned over to Jim Propotnick, the U.S. marshal, who tried to arrange airline passage back to Taipei.

By 6 p.m. the tickets hadn't materialized, and since it was past office closing time, Propotnick was forced to turn the seamen loose.

So the crewmen hunkered down in the courtyard, apparently for the night.

But, at 10:20 p.m., just before a group of Honolulu residents came to offer food and lodging, the captain showed up with three compact cars. According to a Federal Building guard, the 19 crewmen piled in and left, presumably for a good night's sleep and a plane ride home.

The Yang Tong, meanwhile, remains at the Coast Guard station at Sand Island. It may be put up for auction, officials said.

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THE WALL STREET JOURNAL.

Hawaii Hopes To Get More Out of Fishing

By KATHRYN CHRISTENSEN
Staff Reporter of THE WALL STREET JOURNAL

HONOLULU—It appears, at first glance, to be another case of carrying coal to Newcastle.

Hawaii is surrounded by an ocean and boasts a per capita consumption of seafood nearly double the national average. Yet it imports two-thirds of the 30 million pounds of seafood it consumes each year. The region's annual fishery potential is estimated at 74 million to 118 million pounds. But the state's catch has never topped 20 million pounds, and the entire industry contributes less than 1% of Hawaii's gross state product.

"Amazing, isn't it?" says Shurei Hirozawa, a vice president in First Hawaiian Bank's research division. "And here we are, right in the middle of the Pacific."

Change in Climate

Recently, though, Hawaii's fishing industry has begun to shake off that lethargy. In 1979, the state completed a "master plan" to identify and develop its fisheries potential, and now political momentum is building to give the industry its proper niche in Hawaii's economic base.

The area's fisheries potential is put as high as 118 million pounds a year, but the state's catch has never exceeded 20 million pounds. "Amazing, isn't it?" says a bank official. "And here we are, right in the middle of the Pacific."

Along the way, however, proponents of an expanded, more sophisticated fishing industry are facing obstacles ranging from the U.S. Navy down to a fragile bait fish no bigger than a finger. In addition, many within the conservative fishing industry have been wary of change.

"Everything is beginning to break loose now, though, and things are starting to fall in place," says Stanley Swerdloff, manager of the state's fisheries development programs. Adds Drum Inouye of Aku House, a major wholesaler here: "If you want to talk about the past, there isn't much to say."

Tuna Treasure

In the past few years, Mr. Swerdloff says, the capacity of the Hawaiian fleet has more than doubled and modern processing facilities have opened. A state-sponsored project has proven that the Midway Islands fishing grounds, 1,500 miles to 2,500 miles from Honolulu, contain albacore tuna resources that could triple Hawaii's tuna catch within five years.

Experiments to develop heartier bait species and programs to deploy buoys that attract tuna have been started. And this year, the state legislature appropriated $2.6 million to construct dock space in Honolulu Harbor. But perhaps most important for the long term, Mr. Swerdloff says, is the entry into the business of "a new generation of young people who understand marketing and distribution in terms of the world market."

In its development plan, the state notes that fishing techniques, vessels and equipment have changed little in the past half-century. At Kewalo Basin in Honolulu, aging, wooden sampans dominate the fleet that fishes for aku (also called skipjack tuna), which represents at least half of Hawaii's total catch.

The Bait Gap

But it is bait, rather than boats, that stands in the way of larger aku catches. Fishermen here agree that nehu, a type of Hawaiian anchovy, is the most effective bait. It is so fragile, however, that it lives only a few days under the best of conditions. There is no commercial supply, so fishermen spend as much as 30% of their time capturing the bait. Government-sponsored efforts to develop an alternative bait have so far been unsuccessful.

"Skipjack just won't go anywhere until we come up with a new bait," says Jay Puffinburger of Castle & Cooke's Hawaiian Tuna Packers, the state's only cannery. Of about 15,000 tons of tuna handled by the cannery each year, he adds, about 12,000 tons are imported.

Hawaii's other major fisheries include yellowfin and bigeye tuna and bottomfish. While bait isn't such a problem, Mr. Swerdloff says expansion has been hampered by a shortage of dock space, the cost of fuel and the reluctance of commercial bankers here to finance new fishing ventures.

Hawaii's fishermen haven't until recently exerted much pressure on state government to advocate fisheries development, and the marketing and distribution avenues are narrow at best. With the exception of the aku destined for the cannery or the fresh market, most commercial catches are sold through one company—United Fishing Agency—which operates the only fish auction in Honolulu.

Navy Stands in Way

For now, attention is focusing primarily on the potentially lush albacore tuna grounds of the Midway Islands. Because the grounds are so far from Honolulu, time and fuel costs are prohibitive unless a large mother ship stands nearby to transfer catches and supplies. Midway is controlled by the Navy, however, which has cited security reasons in forbidding commercial vessels from entering its calm-water harbor for such transfers.

Even so, in 1979 state officials persuaded the Navy to compromise. Castle & Cooke provided a mother ship, and a fleet of boats from Hawaii landed four million pounds of albacore. The venture proved unprofitable for Castle & Cooke, but the state continues to negotiate with the Navy for other compromises that would permit more boats from Hawaii to fish the area and return their catches to Honolulu.

Other evidence exists that Hawaii's fishing industry is emerging from its torpid past. South Pacific International Seafoods Inc., a private company, three years ago became the state's first major fish processing plant capable of exporting, importing and "flash freezing" large quantities of fish. (Flash freezing produces a significantly higher-quality and higher-priced product than conventional freezing.)

As encouraging as the processing plant, Mr. Swerdloff says, is the arrival in April in Honolulu Harbor of the Hawaiian Princess, a modern, 174-foot fishing vessel owned by Indo-Pacific Fisheries, another new company whose owners include some of the principals of South Pacific. The new fishing vessel can carry and flash freeze a million pounds of fish. If successful, it's likely to bring other technologically advanced vessels to the Hawaii industry.

Still, Mr. Swerdloff and others caution that Hawaii will always need to import a significant amount of fish to satisfy its restaurant and tourist industry. Such species as salmon, oysters, crabs and mahimahi—all popular with tourists—are available only on a limited basis, if at all, in the local fishing region.

15 APR. L 1981
Honolulu Advertiser

Broader aquaculture funds sought

By Jan TenBruggencate
Advertiser Kauai Bureau

LIHUE — Kauai County has asked for federal assistance in development plans for the expansion of aquaculture and commercial fisheries industries for the island, County Council Chairman Jeremy Harris announced yesterday.

Each of the two plans includes several demonstration projects designed to spur private development of aquaculture and fisheries ventures, he said.

The aquaculture development plan is a $185,000 affair, with $74,000 in county money and $111,000 requested from the federal Economic Development Administration. The $115,000 commerical fisheries proposal would have $46,000 in county money and $69,000 from the EDA, Harris said.

The projects have been presented to the federal government through the office of county Economic Development Director Ken Harding.

Harris said he is not aware of Reagan administration budget cuts in the Economic Development Administration area or how they might affect the proposals.

Both plans have substantial economic potential, and by government study standards, are "cheap," Harris said.

Harris said the Kauai Aquaculture Development Plan would be an outgrowth of the 1978 State Aquaculture Plan and would be a specific functional plan for Kauai. With the plan, he proposes four demonstration projects.

A Marine Shrimp Demonstration Project would involve the growing of such shrimp in two half-acre production ponds in the Hanapepe area and the eventual marketing of the grown shrimp after 12 months.

The second project would combine aquaculture, agriculture and energy self-sufficiency. An established piggery would produce wastes used in two ways: one to provide nutrients in tilapia ponds, with the tilapia to be used as live baitfish for longline fishing; and other wastes to be used to produce methane gas, which would fuel a power plant.

A marketing survey and an effort to establish markets for a palatable, good-looking, hybrid tilapia would be the third project.

And finally, a project would convert one of the county's sewage treatment plants into a power plant. The raw sewage would be used as nutrient to grow aquatic plants, and the plants would be distilled to produce alcohol fuel to make energy.

The Kauai Commercial Fisheries Development Plan would find ways to vitalize an island industry beset with problems, including "antiquated and fuel-intensive techniques and gear, the lack of necessary shore-side facilities, inadequate ice and fuel, lack of training programs, and the total lack of processing facilities."

Five demonstration projects are proposed.

- Most Kauai fishing vessels are small and are set up for fuel-costly trolling. A modified longline fishing technique would be developed that is compatible with the small boats and provides more fish per gallon.
- Kauai fishermen catch a limited number of kinds of sea creatures. The project designed to show that there's potential in new varieties would involve development of a demonstration vessel for trapping marine shrimp.
- The state has established fish aggregation buoys around the state, and while they work, they've encountered some problems. Two such buoys would be specifically designed to solve the problems and would be placed in Kauai waters.
- A program would be developed for training and apprenticeships in fishing gear and fishing techniques.
- One of the most common fishes in these waters, and one of the most under-used ones, is the taape. The project would involve development of a filet and processing unit to make taape-fishing appealing.

Anti-prostitution bill compromise OKd

A state House-Senate conference committee last night agreed on compromise language on a portion of a new anti-prostitution bill.

Both legislative bodies had previously concurred on the more important mandatory repeat-offense provision of a $500 fine plus a 30-day prison sentence.

But for a first offense, the original house version had ordered a $500 fine, and also included language prohibiting a judge from making any alternative sentence.

Conferees last

oahu news

bars a plaintiff from recovering if the negligence of the person is more than 50 percent.

Liberty Mutual was considered the plaintiff in the case because it, in effect, "stepped into the shoes" of the driver.

Greig ruled that General Motors — which was represented by attorneys Joseph

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island skies

"GREEN FLASH AND SUN OGS," 2:15 p.m. every day and 8 p.m. riday and Saturday; "POLYNESIAN KIES," 11 a.m. every day, Bishop Mu- eum Planetarium, 1355 Kalihi St.

THE SUN rises today at 6:12 a.m. nd sets at 6:51 p.m. Evening twilight, minutes after sunset; first light morrow, 22 minutes before sunrise.

THE MOON sets at 4:16 a.m. and ets at 4:13 p.m.

MOON PHASES: Full moon, April ; last quarter, April 27; new moon, ay 3, first quarter, May 10.

tides

	HIGH Time	Ht.	LOW Time	Ht.
	1:51 a.m.	1.4	8:31 a.m.	0.6
D.	3:37 a.m.	1.3	5:10 p.m.	0.2

Report predicts expansion of state's fishing industry

After 50 years of no growth, Hawaii's fishing industry — with a spur from the state — may be on the threshold of steady expansion, First Hawaiian Bank reports.

A 1978 state study found substantial resources of fish, lobster and shrimp around the Leeward Islands to the northwest and beyond the state's 200-mile Fisheries Conservation Zone into the North Pacific and south to the equator, notes the bank's monthly publication, "Economic Indicators."

The $150,000 study, funded by a state Legislature bent on broadening the Islands' economic base, estimates the annual catch could be around 66.5 million pounds by 1990. That compares with the estimated landing of 16.5 million pounds in 1979.

The 1990 goal is contained in the state's Fisheries Development Plan, which also projects 1990 income to fishermen of $30 million, up from $17 million in 1979. Direct employment in the industry, including processing, would double, to 2,400.

The state has received federal aid and will continue to seek further grants to speed expansion, says "Economic Indicators." Besides additional modern long-range vessels, the state needs more dock space, more service facilities, reliable supplies of hardy baitfish, financing, marketing services, new technology and continued research, the publication says.

Potential rewards would more than match the high development costs, say the bank's researchers. Today Hawaii must import two-thirds of the 30 million pounds of seafood consumed here annually.

Dollar revenues will not grow proportionately with increased catches because the excess that cannot be marketed fresh will have to be sold at lower prices for canning or other processing.

The biggest potential is in tuna — aku and ahi (albacore, yellowfin and bigeye). Around the Leeward Islands are bottomfish, akule, opelu, Kona crab, lobster and deep sea shrimp — resources "that have hardly been touched," the bank said.

G-8 Honolulu, March 29, 1981 The Sunday Star-Bulletin & Advertiser

Taiwan fishing boat seized

The Coast Guard reported yesterday it has seized a Taiwanese fishing boat operating in U.S. waters 1,650 miles west of Honolulu.

Coast Guard spokesman Bob Baeten said the Yang Tong III, with a crew of 19, was boarded without incident early Wednesday about 165 miles northwest of Kure Atoll. He said the vessel was seized because it was operating within the 200-mile U.S. fishery conservation zone.

The 90-foot vessel was escorted by the Coast Guard cutter Point Harris to Midway for a refueling stop en route to Honolulu, Baeten said. They are expected to arrive here May 1.

Kure, at the far end of the Hawaiian chain, is a U.S. territory and a fish and wildlife sanctuary. Baeten said the incident will be investigated by the Coast Guard and National Marine Fisheries Service.

HONOLULU ADVERTISER Friday, April 24, 1981 A-11

Shore Duty Kept Skipper of 2nd Boat from Ill-Fated Trip

By Charles Memminger
Star-Bulletin Writer

Alan and Cindy Stringer usually went fishing together — he, as skipper of the Keola, and she, of the Three Jacks.

But on Jan. 5, Cindy had too much paper work to do and so, for the first time, Alan took the Keola out alone, with a crew of four persons, for a two-week trip to the French Frigate Shoals.

Two days later, the Keola ran aground in heavy seas near Little Gin Island, 420 miles west-northwest of Kauai. The crew managed to salvage some food and supplies and make it to the tiny island before the tide rose and swept the damaged boat off the sandbar.

For the next 12 days, Stringer, 37, and crew members Alan Reis, 28; Llawona Corbit, 26; Chris Kalama, 23; and Jennifer Scafe, 26, stuck it out on the island and waited for help.

"As far as I knew, they were still fishing," Cindy Stringer, 41, said in an interview. "I didn't expect to hear from them for two weeks."

Cindy had talked to her husband by radio until the boat got out of range of her five-band radio two days after leaving its Kewalo Basin slip.

That night, misfortune struck the Keola.

CINDY SETTLED into a daily routine of taking care of the other boat, unaware that her husband and the crew were spending their days baking in the sun and nights riding out high tide in a tiny raft as waves washed across the flat island.

"When I got a call Monday from the wife of the skipper of the Archer, I was really shocked," Cindy said.

The crew of the Archer, a 63-foot fishing boat, spotted flares from Little Gin Island early Monday morning and a Coast Guard spotter plane later confirmed that the Keola had been wrecked but the crew was safe on the island.

Radios, food and emergency supplies were dropped by the Coast Guard to the survivors, but the heavy seas kept the Archer from getting close enough to the island to pick up the stranded fishermen, a Coast Guard spokesman said.

FOR LLAWONA Corbit's uncle, Miles Hooper, word of the shipwreck came from an unofficial source.

Hooper, a Kauai real estate agent, said he had heard news that a fishing boat had run aground in the French Frigate Shoals but thought nothing about it.

Then, as he watched the news on television Monday night, he recognized his niece's name when the names of the crew were flashed on the screen.

"I called her parents in California and they were in shock. Her mother is flying out to Kauai to meet her when they come in," he said.

For Cindy Stringer, it was somewhat of a relief to know that the worst of the incident was over before she even knew anything was wrong. At least she knew her husband was alive and well.

She did spend one tense night, however, waiting to hear when her husband would be rescued. The word came Tuesday that a 16-foot Boston whaler from the U.S. Fish and Wildlife Service station on nearby Tern Island had successfully picked up the Keola's crew.

"APPARENTLY everyone is fine," Cindy said after talking to her husband through the Fish and Wildlife Service's communication station at Kilauea Point on Kauai. "They have a pretty nice place to stay on Tern Island and I have chartered a plane to go pick them up on Friday."

A Coast Guard spokesman said they could not transport the stranded fisherman back to Honolulu because they are not in danger.

"As long as they are safe and sound, we cannot compete with private enterprise," the spokesman said.

Hooper has also talked to his niece over the radio.

"She said everyone is fine, but she sounded a little tired," he said. "I think she is still in a state of shock."

CORBIT TOLD her uncle that riding out the high tides at night was "extremely frightening" and that the crew had fired off flares every night hoping to attract help. It wasn't until the 12th night, however, that the flares were finally spotted.

Corbit told him that the Keola originally rested on a shallow sandbar after being wrecked so the crew was able to unload some food and supplies. But after the tide came in, the ship was washed off the sandbar and sank, Hooper said.

The food supply was getting low when the survivors were spotted, Corbit told him.

Corbit is planning to fly back to California upon her return to Hawaii, Hooper said.

"She was the boat's cook. Now there is no boat so she doesn't have a job," he said.

Corbit met the Stringers in Oregon several years ago and worked for them there, Cindy Stringer said. She later joined them in Hawaii, Stringer said.

THE STRINGERS fished in Hawaii for nearly 2½ years with one boat, the Three Jacks, until they acquired the Keola 1½ years ago. Since then, they always took the two boats, both 75 footers, out together, Cindy said.

But this time, she said, "At the last minute, I decided to stay back and get caught up with paper work. I never anticipated I would never see that boat again."

Before coming to Hawaii, the Stringers fished up and down the Mainland West Coast, Cindy said.

The Stringers generally fish for tuna but during this off-season, they go after bottom fish to be sold locally, Cindy said. They have often gone to the French Frigate Shoals with much more success.

"It can be treacherous," Cindy said, because of the shallow reefs and sandbars. "But it is one of the areas with good fishing."

ALAN STRINGER did not tell his wife too much about the night the boat ran aground or how the crew managed to survive for nearly two weeks exposed to the elements.

It will cost more than $2,000 to charter the Hawaiian Sky Tours plane to pick up the crew, but the Stringers are happy to bear the cost.

'SISTER SHIP'—Cindy Stringer stands aboard the Three Jacks, a companion boat of the fishing vessel Keola, which ran aground and sank off Little Gin Island. Her husband, Alan Stringer, and four others spent two weeks on the island before being rescued. —Star-Bulletin Photo by Dennis Oda.

Daily Hilo Auction Has Special Flavor

NICE CATCH—Moses Kuahiwinui of Pahoa unloads his fish for auction.

HILO, Hawaii — It was nearly 7 a.m. and fish buyers and sellers had gathered around while a few oldtimers ignored the activities and played cards in a back room.

The open fish auction held six days a week along the waterfront by the Suisan Co. is one of Hilo's most colorful scenes.

And the star attraction is the auctioneer, Hiro Nishimura, 69, who has worked for Suisan 43 years and has rarely missed a day on the job.

"He's part of the place," one of the fishermen commented.

Except for a few tourists looking on, it was a familiar and social group. Everything seemed to be routine, except the prices.

Moses Kuahiwinui of Pahoa delivered a big catch after fishing in the Kapoho area but said he didn't know how many fish he had.

"I never counted. I don't know. They just happened to come around," he said.

THE FISHERMEN sorted and weighed their catches. Prospective buyers examined the array of fish looking for a good deal. And Nishimura was busy cleaning opelu and "coloring it nice" with the blood to dry in the sun, apparently for pupus later in the day.

Once everything was organized the bidding moved swiftly, with Nishimura starting out in Japanese, switching to English and then back to Japanese.

"It's very unique," a fisherman explained. "Hiro has the lingo for old peddlers — old Japanese. Sometimes people can't understand the lingo."

But even if the "lingo" was confusing, it was clear that the auctioneer wasn't satisfied with the bids.

"What's the matter? 60 cents? I'll give a piece of it free," he said, trying to get 69 cents a pound for some ahi (yellowfin tuna.)

Sometimes there are 100 or more ahi lying on the floor, but that would be an exceptional day, the fishermen said.

THEY SAID THERE seemed to be an oversupply of tuna in Honolulu and Hilo, which had depressed the prices.

"The prices are gonna come from Honolulu," one of the fishermen explained. "The people here know the price in Honolulu when the auction begins. If it's $2 a pound in Honolulu, it's going to be under that here.

"The only place you're going to see the price nice and high is in the supermarket," he added.

Kilauea Fish Market and Richard Kubo, who peddles fish from a truck, teamed up to buy a big fish at $1.50 a pound.

"It's not a good price but it can't be helped," said Nishimura. "No more the demand."

The auction ended, but the people lingered on to swap stories, drink coffee and, perhaps, to sample Nishimura's dried opelu.

UNIQUE STYLE—Suisan auctioneer Hiro Nishimura combines Japanese with English to woo higher prices for the fish. —Star-Bulletin Photos by Terry Luke.

It's a Unique Way to Fish for Tuna

'Ika-Sibi' May Mean Profitable New

By Helen Altonn
Star-Bulletin Writer

HILO, Hawaii — "Ika" means squid in Japanese and "sibi" means tuna, and when you put them together, you've got the makings of a unique and promising new Hawaii fishing industry.

Ika-sibi fishing is a relatively inexpensive method of handline fishing for tuna at night with squid as bait.

"What it's all about is burning a light and the squid come to the boat and the ahi come to eat the squid," Larry Chow of Hilo explained in an interview during an early morning fish auction at the Suisan Co.

Chow, 42, switched from construction to ika-sibi fishing because he likes to fish.

"You don't have to listen to anybody and you can do your own thinking," he said.

IT'S ALSO AN extremely profitable business for many ika-sibi fishermen, who primarily catch bigeye tuna, yellowfin tuna (ahi) and albacore.

Chow said some fishermen make $50,000 to $60,000 a year "and the luckier, more consistent, fishermen make more." Many average $80,000 a year and some are in the $150,000 bracket, according to other sources.

Ika-sibi fishing can be done by one fisherman, or he can take a partner, Chow said. Only a small boat and fishing gear are needed.

"It's not a big sampan deal," he said.

"But you've gotta have a strong back because everything is done by hand," he added.

The fishermen leave port to arrive at the fishing grounds at sundown. They lower a parachute in the water as an anchor and turn on surface and underwater lights. They drop lines at varying depths and fish first for squid to use as bait and then tuna.

They fish all night and leave in time to reach the 7 a.m. auction or unload their fish for shipment.

DURING OFF-SEASON, the boats do bottomline fishing "but it doesn't make money like ika-sibi," Chow said.

"You've gotta have weight to make money and it's the only type of fishing where you can catch some weight. If you catch five or six, it would be big weight."

He said the biggest tuna he ever caught was 280 pounds.

"You can practically almost sink your boat if the fish are biting," he said.

It's also possible for the fish to catch the fisherman if the lines becomes snarled, which is one of the hazards of the trade.

Until recently, only fishermen on the Big Island and in the Philippines were known to use the night handline fishing method for tuna. And on the Big Island it was confined largely to a small area off Hilo.

Larry Chow

OKINAWAN immigrants are believed to have started the fishery in Hilo sometime in the 1920s — going out at night to catch squid as they had done in their homeland.

"Occasionally something large would strike and snap at their lines," said Heeny S.H. Yuen, marine biologist at the Honolulu Laboratory of the National Marine Fisheries Service, who has studied the history of ika-sibi fishery.

After learning from the native Hawaiians that large tuna probably made the strikes, the Okinawans equipped themselves with gear to catch tuna, towing them alongside the boats to port, he said.

After World War II, three or four boats installed iceboxes to concentrate on tuna, Yuen said. They sold their fish only on the Big Island until 1971 when tuna prices made it economical to air ship the fish to other markets.

But the only fishing area was at Hilo until about 1977, when 10 or so boats were reported fishing from Kona.

NOW THERE IS A growing number of ika-sibi boats in Kona, a few on Kauai and Maui and "rumors of some" on Oahu, according to Walter Ikehara, who is studying the fishery under a fisheries service contract.

He estimates "maybe less than 100 boats" statewide, although he hopes within a few months to have a better idea of how big the fishery is and its economic importance.

"Considering the weight and value of the fish shipped out, it must be enormous," he said.

A lot of the fish goes to Oahu and some wholesalers are sending it to Japan and the Mainland, where it sells for about $15 a pound, Ikehara said.

HE SAID THE fishery has "fantastic" potential, particularly for the export market, if a problem of burnt tuna can be solved.

This is a condition in which raw tuna is paler and softer than normal.

"You can eat it, but as far as sashimi is concerned, it's valueless," Ikehara said. It looks unattractive and tastes a little sour or bitter, he said.

Although the burnt condition is a serious problem with the handline fishery, it is even worse with tuna caught by trolling.

NMFS scientists have been investigating the reasons for the condition and looking for a solution for six years. They say it is similar to a condition in pork called Porcine Stress Syndrome. Both conditions involve stress, high body temperatures and acidity of muscle.

When the fish is struggling hard, its temperature increases and a lot of lactic acid is formed, causing a breakdown in muscle tissue, said Ikehara, who also has studied burnt tuna under contract with the Pacific Tuna Development Foundation.

"IT'S A COMPLEX problem," he

Industry for the Isles

said. "Japan has it and it has been seen elsewhere and it has not been studied enough."

Fishermen have tried various methods to prevent the burnt condition, including the use of baking-potato nails to draw the heat out of the fish faster, a method devised by NMFS scientists.

But no method has been found yet that's fully acceptable to the fishermen.

Ikehara said the only answer is to kill the fish as soon as they hit the hook to prevent them from struggling, which is very difficult to do.

He said Kauai fishermen are experimenting with a tool similar to one developed by a Japan tuna scientist to paralyze the fish.

Another device to stun the fish with a small charge has been developed by Ed Noda, former head of the ocean engineering department at the University of Hawaii, but it hasn't been tested, he said.

5 still await rescue on remote islet

By Jim Borg
Advertiser Military Writer

Rough seas and winds up to 50 mph yesterday delayed the rescue of three men and two women who became stranded at French Frigate Shoals after their fishing boat went aground and sank 12 days earlier, the Coast Guard said.

At times using a raft to ride out seas that washed over tiny Little Gin Island, all five crew members of the 75-foot Keola, based at Kewalo Basin, were reported in good condition after a Coast Guard plane dropped a radio and emergency supplies, spokesman Bob Baeten said.

Baeten said the five were "jumping into their little raft and riding it out" whenever seas washed over low-lying Little Gin, which measures about 30 by 100 yards.

The Coast Guard was alerted after red flares were spotted Sunday night by members of the U.S. Fish and Wildlife Service on nearby Tern Island, part of the French Frigate Shoals group, 415 miles west-northwest of Kauai.

A search-and-rescue plane sighted the party yesterday morning, but Baeten said bad weather prevented the only vessel in the area, the 63-foot fishing boat Archer, from sending a rescue party ashore.

The Keola's crew was identified as Alan Stringer, 37, the owner and operator; two other men, Chris Kalama, 23, and Alan Reis, 28; and two women, Llawona Corbit, 26, and Jeannie Skaff, 28.

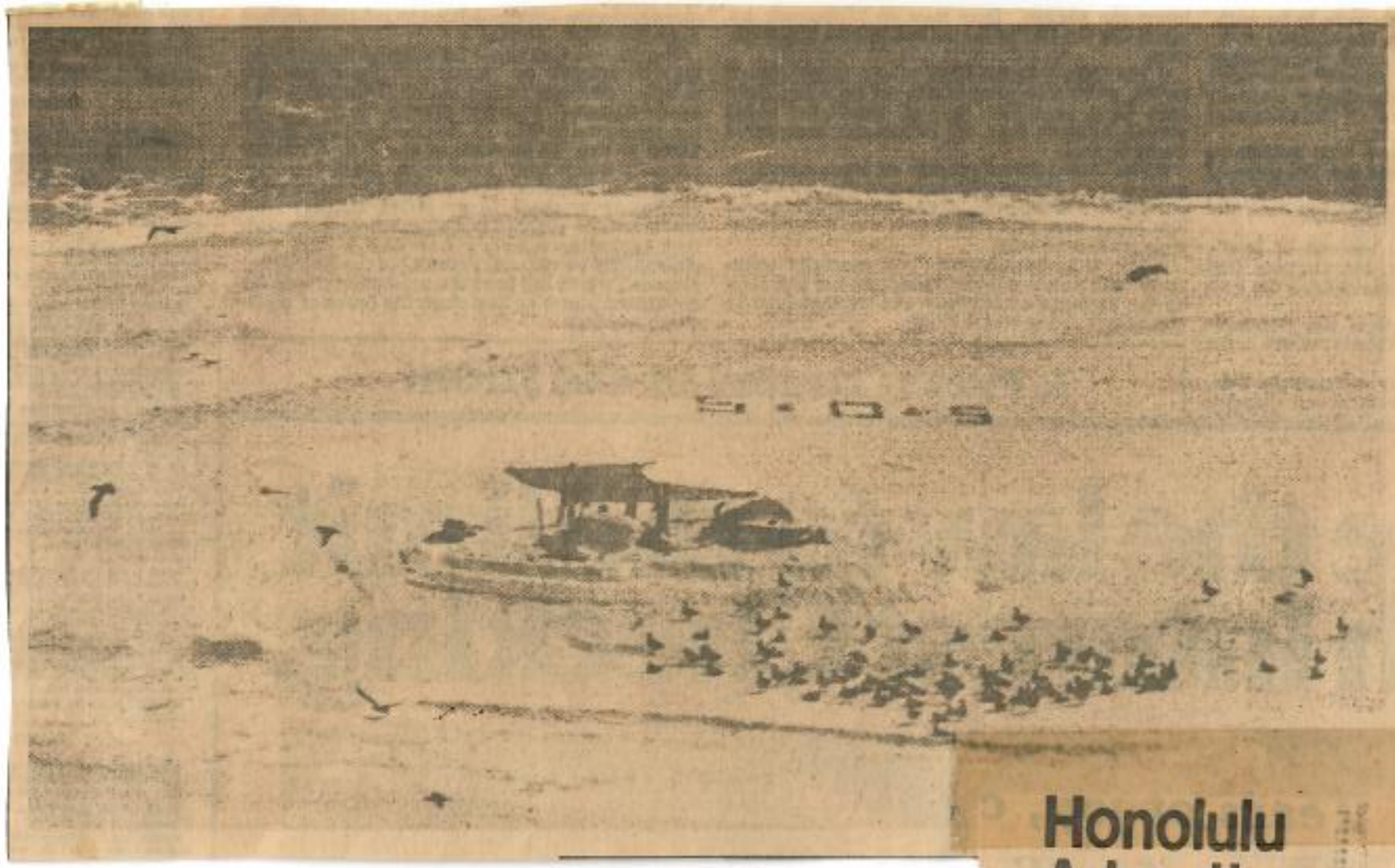
If today's weather permits, Baeten said, the crew of the Archer will try to get the five out by using two 16-foot Boston Whalers belonging to the Fish and Wildlife Service at Tern Island.

The Keola left Kewalo Basin on Jan. 5, Baeten said, but was never reported missing — presumably because the crew members didn't tell anyone that they were going.

The boat went aground and sank two days into its voyage, but the crew evidently was able to salvage some food and equipment, including the raft.

A Coast Guard photograph showed that the party also had written the letters "SOS" in the sand, possibly by using the carcasses of birds.

A second plane was sent out yesterday to drop supplies of fresh water.



Stranded 2 weeks on shoal

With the letters "SOS" formed in the sand, five crew members of the Honolulu-based fishing vessel Keola await rescue after 12 days on Little Gin Island in French Frigate Shoals, 420 miles west-northwest of Kauai. The boat ran aground and sank Jan. 7, and Coast Guard planes, which spotted the survivors yesterday, dropped a radio, fresh water and emergency supplies to the three men and two women. Story on Page C-2.

Coast Guard photo by Lt. Bill Slack

Honolulu Advertiser

Tuesday, January 20, 1981 A-3

5, marooned for 13 days, removed from tiny island

By Jim Borg
Advertiser Staff Writer

Three men and two women were rescued yesterday off Little Gin Island in the French Frigate Shoals, where they were stranded for 13 days since their Honolulu-based boat ran aground and sank.

The five were taken to Tern Island, where there is a U.S. Fish and Wildlife Service station.

The Coast Guard said they remained last night at the station, which is 6 miles north of Little Gin and 420 miles west-northwest of Kauai. All were reported in good condition.

The crew of the fishing vessel Archer rescued the five with a help of a 16-foot raft borrowed from the Fish and Wildlife Service.

The problem now is how to get the five back to Honolulu.

Because there are no injuries, the Coast Guard is not authorized to fly them home.

Cindy Stringer, part-owner of the sunken 75-foot Keola and wife of skipper Alan Stringer, said there are three possibilities.

Hawaiian Sky Tours, the only airline licensed to fly to French Frigate Shoals, could send a 10-seat plane up on Friday at a cost of $2,100, she said.

In addition, the Keola crew members could return on the Archer, which is due back next week, or on the Blarney, a tugboat now in the area of Laysan Island.

The Blarney is due to return at the end of the week, Cindy Stringer said. The return voyage takes three days.

Cindy Stringer was to try to place a telephone call to her husband last night through the Fish and Wildlife Service's communications station on Kilauea Point on Kauai. However, bad weather reportedly was making communications difficult.

Besides Alan Stringer, the crew members off the Keola are Jennifer Scafe, 20; Chris Kalama, 23; Alan Reis, 28; and Llawona Corbit, 26.

Cindy Singer said the Keola had not been reported missing because it was not due back until tomorrow.

The boat left Kewalo Basin on Jan. 5 and sank two days later.

ENVIRONMENTAL STUDIES FORUM presents

17 NOV 81
Honolulu S-B

Leeward Isles' Wildlife, Fishing to Be Discussed

A panel discussion on "Conservation and Commercial Fishing in the Northwestern Hawaiian Islands" will be held at 12:30 p.m. tomorrow in Room 103, Gartley Hall, University of Hawaii.

Taking part in the discussion, sponsored by the UH Environmental Studies Forum, are Richard Shomura, National Marine Fisheries Service; Stan Swerdloff, state Department of Land and Natural Resources; Robert Shallenberger, U.S. Fish and Wildlife Service; Sheila Conant, UH general science department; and Lewis Agard Jr., a commercial fisherman.

The state is encouraging an expansion of commercial fishing to help diversify Hawaii's economic base. The Northwestern Hawaiian Islands, also known as the Leeward Islands, have been identified as having potential.

Conservationists are concerned as to how fishing operations might affect the islands' sea birds, land birds, marine mammals, insects and plants.

GARTLEY HALL 103, 12:30-2 p.m., NOV 18, WEDNESDAY

Starring: Dr. R. Shallenberger, U.S. Fish & Wildlife Service
Dr. S. Conant, UH General Science Faculty
Mr. S. Swerdloff, State Dept. of Land & Nat. Resources
Mr. R. Shomura, Nat'l Marine Fisheries Services
Mr. L. Agard, Jr., Commercial Fisherman

Plans for Isle National Wildlife Refuge

Monday, July 4, 1983 Honolulu Star-Bulletin A-13

PREPARATION has started on a master plan for the Hawaiian Islands National Wildlife Refuge, established in 1909 by President Theodore Roosevelt to protect the birds on the far-flung atolls and islets.

The plan, to be completed by September 1984, is being prepared by the U.S. Fish and Wildlife Service to establish long-range objectives for resource management and public use. Principal wildlife in the refuge includes 18 breeding species of seabirds, four endangered land bird species, the Hawaiian monk seal and the green sea turtle.

Work on the plan is a logical outgrowth of the five years of research on resources of the Northwestern Hawaiian Islands that resulted from the Tripartite Agreement, according to Robert J. Shallenberger, who serves as refuge manager in his capacity as supervisory wildlife biologist with the Fish and Wildlife Service.

Data from the research will be used in preparing the master plan, with work to be done by a team that will include Shallenberger and the service's staff here as well as the planning coordinator in the service's regional office in Portland, Ore.

Refuge master planning is described as an effort by the service to insure incorporation of national policy direction into management of the 413 refuges in the National Wildlife Refuge System. Master plans won't necessarily be prepared for all the refuges as certain refuges don't need them, Shallenberger said.

THE PLANNING PROCESS will include a data inventory and resource mapping phase and an analysis of suitability of refuge lands and waters for existing and

Harry Whitten

potential uses. A draft and final environmental impact statement will be developed for the master plan.

The public is encouraged to become involved in the process. Newsletters will be distributed to explain the planning process and to provide opportunity for interested parties to present their own ideas.

Helping birds, Hawaiian monk seals and green sea turtles of the Northwestern Hawaiian Islands.

Those who wish to be on the newspaper mailing list should write to:

Refuge Manager
Hawaiian Islands National Wildlife Refuge
P.O. Box 50167
Honolulu Hawaii, 96850

Or those interested may phone 546-5608.

The refuge was established by President Teddy Roosevelt after thousands of seabirds in the small islands had been slaughtered for feathers. Unrestricted commercial exploitation of seals and turtles also preceded his action.

In a report before a 1980 symposium, Shallenberger said that the refuge designation came too late for at least three native bird species unique to Laysan Island that became extinct early in this century as a result of habitat destruction by rabbits.

"OTHER SPECIES, notably the Laysan duck, Laysan finch, and the Hawaiian monk seal, perched precariously on the brink of extinction early in this century, yet all experienced a reversal of this trend under the refuge umbrella," he said.

In the absence of effective management and enforcement, exploitation of some forms of refuge wildlife occurred intermittently past the midpoint of this century, he said, pointing to commercial harvest of green turtles at French Frigate Shoals as recently as 1959.

More recent threats have included accidental introduction of rats on some islands and introduction of aggressive weed species. In 1977 more than five million gallons of crude oil was spilled from the vessel Irenes Challenge when it broke apart 50 miles north of Lisianski Island but by chance the spill missed the refuge. However, bilge oil and pollutants such as trash and discarded fishing gear often litter the island beaches.

The refuge is also a research natural area, receiving this designation from the Federal Committee on Ecological Research. As such, it gets no added legal status but research is given high priority after designation, Shallenberger said.

"The idea is to protect the ecosystem in its natural state," he said.

Events

THE WAIMEA ARBORETUM Foundation's annual plant sale and exhibition will be held from 10 a.m. to 4 p.m. Saturday and Sunday on the grounds of Waimea Falls Park.

The sale will include many kinds of plants and there will also be educational displays by several environmental or educational organizations. Lectures will be by the park's staff. Keith Woolliams, director of the Waimea Arboretum, will present a program at 9 a.m. Saturday and Rudy Mitchell, the park's resident pre-historian, will speak at 10:30 a.m. and 1:30 p.m. Sunday on the history of Waimea Valley.

Proceeds go to further the work of the Waimea Arboretum Foundation, a non-profit organization. Admission to the sale and exhibition is free. Information may be obtained by phoning the Waimea Arboretum at 638-8655.

The Makiki Environmental Education Center has announced a summer nature adventure and fun program for children in the 8-11 age group from 8:30 a.m. to 11:30 a.m. Aug. 1-5, Aug. 8-12, Aug. 15-19, and Aug. 22-26.

The children will get to explore Makiki Stream, help care for plants and animals, learn new songs and games, make things of natural materials, walk on mountain trails and play outdoors.

The fee is $25 per week. Information may be obtained from the center, at 2131 Makiki Heights Drive, Honolulu, Hawaii 96822, phone 942-0990. MaryAnn Kobayashi will be the program director Aug. 1-12 and Faith Roelofs Aug. 15-26.

Biologists and Fishing Interests

BIOLOGISTS INTERESTED in birds, turtles and seals and the state, eager to promote commercial fishing, have not seen eye to eye about the string of small islands stretching northwest from the main Hawaiian Islands.

A proposal for resolving the differences has been presented by Craig S. Harrison in an essay that recently won the $300 first place award in the contest sponsored by the Hawaii Chapter, American Planning Association.

Harrison proposes that the Northwestern Hawaiian Islands be managed as a marine sanctuary by the National Oceanic and Atmospheric Administration (NOAA).

He has been a seabird biologist here with the U. S. Fish and Wildlife Service, is now the chairman of the Pacific Seabird Group, and is also completing requirements for a law degree at the University of Hawaii.

Dale T. Coggeshall, Pacific Islands administrator of the Fish and Wildlife Service, has read

The future of the Northwestern Hawaiian Islands is at stake.

Harrison's essay, considers it well done as a law school paper, but also says, "It does not reflect the views of the Fish and Wildlife Service."

Today there are conflicts over management of the marine resources in the small islands, Harrison says, with a number of agencies involved. There are the state Departments of Land and Natural Resources, of Planning and Economic Development, the Fish and Wildlife Service, National Marine Fisheries Service, and the Western Pacific Fisheries Management Council.

"WHAT IS THE PROPER balance between wildlife conservation and fishery exploitation?" Harrison asks, discussing the jurisdictional disputes.

All but Midway and Kure of the islands were established as a refuge by President Theodore Roosevelt in 1909 and today are administered as the Hawaiian Islands National Wildlife Refuge by the Fish and Wildlife Service.

They have an estimated 10 million marine birds of 18 species, including seven species that are rare, plus the endangered Hawaiian monk seal and green sea turtle.

Harrison says the islands "are a relatively undisturbed natural ecosystem that can serve as a natural laboratory. Several rare fishes occur there and Kure Island is unique in that it is the northernmost coral atoll on earth."

The state has been a strong proponent of fishery development and has estimated the potential fishery yield at 100 million pounds per year, but Harrison says this estimate may be excessive. There are skipjack tuna, bottom fish, shrimp, lobsters, and pelagic fish that may be caught by trolling.

Fisheries are not now permitted in the refuge's waters but Harrison points out that the foreign skipjack tuna fishery beyond the three-mile limit is unregulated. The state has asked use of Tern Island in French Frigate Shoals as a fishery support station but the Fish and Wildlife Service denied the request.

HARRISON SAYS, "The existing management regime overemphasizes conflicts among agency goals and underemphasizes areas of compatibility. Many fisheries are compatible with wildlife conservation." He said that seabird populations could be used to monitor status of fishery stocks, that a decline in seabird populations would serve as a clear warning that fish stocks are low.

He says that the Fish and Wildlife Service and the National Marine Fisheries Service have overlapping responsibilities for protection of the sea turtles and monk seals, that the Wildlife Service lacks the comprehensive viewpoint necessary to manage the entire ecosystem, that the state's fisheries program has been underfunded, and that many conservation laws have been weakly enforced.

The patchwork of jurisdictions and laws in the islands does not properly protect its wildlife resources, Harrison says.

The solution, he says, is through a marine sanctuary program to insure a balance between uses. The Office of Coastal Zone Management in NOAA administers the marine sanctuary programs.

An institutional program similar to that proposed for the Northwestern Hawaiian Islands exists for the Farallon and Channel Islands off the California coast, Harrison says. The seabird and marine mammal colonies are managed by the Department of the Interior but the surrounding waters are managed by NOAA as marine sanctuaries.

Harrison says that sanctuary status would be consistent both with wildlife conservation and fishery development. Establishing it would require a joint state-federal effort.

"THE DESIGNATION of a marine sanctuary in the Northwestern Hawaiian Islands would be a bold step forward toward wise management of the marine resources there," Harrison says. "It is an idea whose time has come."

Coggeshall, for his part, doesn't think the time has come. He says the refuge program for the islands cannot be taken out of the context of the national program, that a more sophisticated and comprehensive approach to wildlife is needed.

As for NOAA, a number of environmentalists would favor

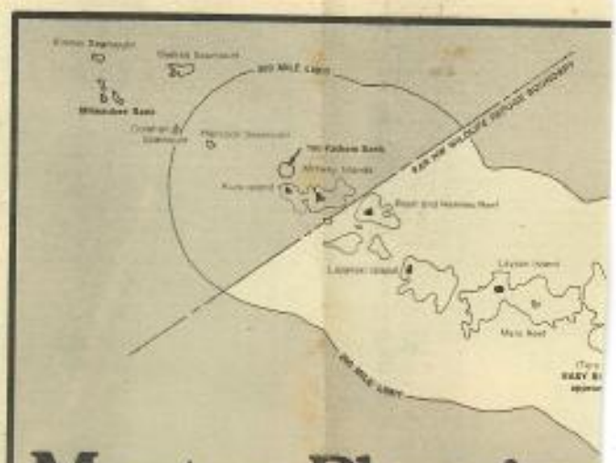
Disagree

making it an independent agency if President Reagan's plan to reorganize the Commerce Department into the Department of International Trade and Industry is adopted.

At present NOAA, with 12,000 employees, accounts for 60 percent of the department's budget and 40 percent of its personnel, but the department is said to be inclined to pay more attention to economic development than to ecological matters.

NOAA has a long list of responsibilities, including regulation of fisheries and marine mammal protection, responding to oil spills, weather forecasting, research on the oceans, on atmospheric pollution, and coastal zone management.

The only Hawaiian monk seal in captivity may be seen at the Waikkiki Aquarium.



Master Planning the HINWR

by Sylvia M. Rodgers

■ Public input is being sought in the development of the Master Plan for the Hawaiian Islands National Wildlife Refuge, said Refuge Manager Robert Shallenberger in an interview recently.

The plan, which is currently being developed with a completion date set for September 1984, will be a "fine-tuned management plan" for the HINWR, which includes the islands and atolls of Nihoa, Necker, Gardner Pinnacles, Lisianski, Laysan, French Frigate Shoals, Maro Reef, and Pearl and Hermes Reef, said Shallenberger. The plan will also address management of lagoon waters and submerged lands in the area, even though the State and federal governments have not come to an agreement over who has legal jurisdiction of them, Shallenberger added.

Although a part of the State of Hawai'i, the islands and atolls in the Refuge are under the jurisdiction of the U.S. Fish and Wildlife Service, the agency formulating the Master Plan.

"The FWS is serious about public input," said Shallenberger, who has scheduled three newsletters, two public workshops and numerous meetings with interested groups during the master planning process.

The first newsletter, released last September, was mailed to 357 individuals agencies and organizations and was reprinted in the October issue of HAWAII FISHING NEWS. That newsletter contained a response form which asked the public what they "perceive to be the issues or concerns that should be considered in the master planning process." The FWS received 98 responses.

"In general, respondents considered regulation enforcement and resource management issues, particularly those relating to threatened and endangered species, to be of very high priority in master planning," according to the second newsletter which was mailed out recently. "Refuge boundary questions and interagency cooperation were also highly ranked. Religious freedom rights and public use issues were ranked at the low end of the scale. However, commercial fishing opportunity ranked near the top of the varied public use issues."

The majority of the second newsletter discusses "the exiting and potential outputs for the refuge." Outputs are the various things the refuge can produce, and, according to the newsletter, include the production and maintenance of various endangered, threatened, migratory, marine and terrestrial species; the protection of various environments (e.g. scientific and archeaological sites); opportunities for consumptive and non-consumptive recreation (e.g. bird watching, sport fishing, etc.); opportunities for consumptive and non-consumptive commercial uses (e.g. fishing, scuba tours, nature tours, etc.); and opportunities for environmental education and interpretation (e.g. on-site or off-site educational centers, like the one at Kilauea, Kaua'i). The second newsletter has a response form asking the public for comment on the FWS' interpretation of the potential outputs of the Refuge.

A third newsletter, describing resource management options, will be followed by a workshop on O'ahu, probably in January 1984, said Shallenberger. A draft Environmental Impact Statement will then be distributed, and a second workshop will take place about April or May. The final EIS and Master Plan is scheduled for the end of July, with a 30-day review period before the plan is adopted.

Although the FWS is actively seeking public input in the planning process, the FWS and the Department of Interior will make the final decision, said Shallenberger. "I want to make it clear, there will be no vote," he said.

Persons interested in receiving the newsletters or who want to comment on the future management of the Refuge should write to: **Refuge Manager, Hawaiian Island NWR, P.O. Box 50167, Honolulu, HI 96850.**

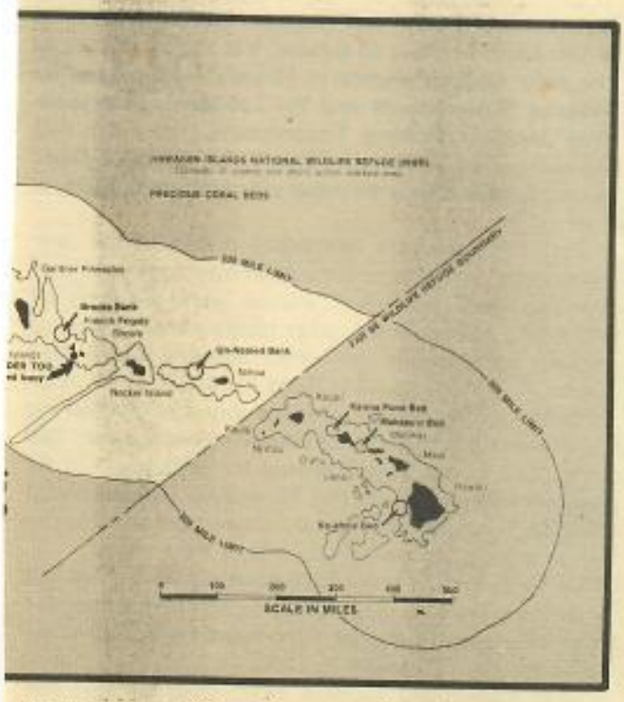
Commercial Fishermen

Of interest to commercial fishermen going to the Northwestern Hawaiian Islands is the recent installation of an emergency mooring and anchorage at French Frigate Shoals.

The Easy Rider Corporation, with permission from the FWS, fixed the mooring system at 23°45' N, 166°1' W. All boats may seek shelter at the buoy during

NOV 1983.

COMMERCIAL FISHING



emergency conditions. However, please be advised that the system may be removed by the Easy Rider Corp. without public notice.

The particulars about the mooring system, which is currently in operational use, can be acquired from the Refuge Manager in Honolulu at the previously listed address. Ask for the public notice on the *Emergency Mooring and Anchorage at French Frigate Shoals.*

Hawaiian Monk Seals

A male Hawaiian monk seal is now in captivity at the Waikiki Aquarium and may be viewed from 10 a.m. to 5 p.m. any day of the week. Entrance to the aquarium is a $1.50 donation for adults and free for children.

There are only an estimated 500 to 1,000 Hawaiian monk seals living today, according to the National Marine Fisheries Service. The seals are an endangered species and a major issue in discussions concerning management of the HINWR, as the isolated islands and atolls of the Northwestern Hawaiian Islands are their only terrestrial habitat.

. . . Sylvia

University of Hawaii
Sea Grant College
Program

"Toward the Sea"

MAKAI

Vol. 5, No. 8
August
1983

NWHI Fishing-An Iffy Opportunity

by Rick Klemm and Susan Pirsch

The joint use of the Northwestern Hawaiian Islands (NWHI) for expanding the state's commercial fishing industry and for the continued preservation of wildlife was the dominate issue at a symposium held at the University of Hawaii in Honolulu, May 25 to 27. Because of less than expected economic potentials of fisheries stocks and of conservation policies, development of commercial fishing in NWHI appears to be at best cautiously optimistic. And, if any large-scale fishing does occur, then conservationists will become concerned about the industry's effects on the wildlife and environment there.

The symposium, "Resource Investigations in the Northwestern Hawaiian Islands," was focused on research carried out over the last 5 years on the living resources in the islands. The symposium and the research were supported by the Hawaii Department of Land and Natural Resources; National Marine Fisheries Service, Honolulu Laboratory; U.S. Fish and Wildlife Service; and the University of Hawaii Sea Grant College Program. Because of its significance, the symposium was designated a National Sea Grant event.

The Northwestern Hawaiian Islands are a 1,150-mile chain of uninhabited islands stretching diagonally across the Pacific northwest of Kauai and the other main Hawaiian islands. Most of the islands in the chain lie within the Hawaiian Islands Reservation (now known as the Hawaiian Island Natural Wildlife Refuge) established in 1909 by President Theodore Roosevelt. The same islands were also declared a state wildlife refuge in 1952. Outside the refuge are Midway Islands and Kure Atoll. Midway Islands belong to the U.S. Navy and Kure Atoll is part of the Hawaii State Seabird Sanctuary.

Widely known as the home of the endangered Hawaiian monk seals and protected green sea turtles, NWHI is home to numerous plants and animals, some found nowhere else. For example, researchers have found a group of spiders never before found on oceanic islands. Among the more populous life are 18 species of seabirds, numbering close to 14 million.

In the waters around NWHI are also commercially important quantities of several finfish and shellfish. Perhaps the most important species to the state's economy are the tunas, especially skipjack and albacore tuna. Up to 70 California boats—as well as Japanese and Taiwanese boats—have been working the albacore fishery north of Midway Islands in recent years. Research data also indicate the presence of commercially significant numbers of bottomfish (snappers and groupers), lobsters, ono (wahoo), ulua (jackfish), deepwater shrimp, squid, and precious corals.

Because the fisheries around the main Hawaiian islands are probably producing maximum harvests, the state is interested

(Continued on page 5)

Decisionmakers Lean Toward Conservation in Northwestern Hawaiian Islands

by Peter J. Rappa,
Information Specialist

The likelihood of using Tern Island as a site for a permanent support facility for commercial fishermen in the Northwestern Hawaiian Islands is remote, based on the results of a study of decisionmakers who have jurisdiction over use of the area. In addition, most of the decisionmakers believe that economic development at the expense of the wildlife and pristine environment in the Northwestern Hawaiian Islands is not worth the cost.

The results of the study by Drs. Susan K. Miller and Jack Davidson were presented in a paper at the symposium, "Resource Investigations in the Northwestern Hawaiian Islands," held May 25 to 27 at the University of Hawaii. The symposium and research in the Northwestern Hawaiian Islands were sponsored by the Hawaii Department of Land and Natural Resources; National Marine Fisheries Service, Honolulu Laboratory; U.S. Fish and Wildlife Service; and the University of Hawaii Sea Grant College Program.

Miller and Davidson's research was

(Continued on page 2)

NWHI Conservation *(Continued from page 1)*

Research in the Northwestern Hawaiian Islands indicates that fishing for profit there will be tougher than earlier anticipated.

part of a 5-year program of research in the Northwestern Hawaiian Islands aimed at determining the commercial fishery potential and at gathering other data related to wildlife preservation and management. Their study focused on the development of policies under which commercial fishing may take place in NWHI. One of the analytical techniques they used was the Delphi procedure to determine what management schemes decisionmakers would favor to manage the fisheries in NWHI. This technique uses expert opinion to forecast policy decisions.

Twenty-five decisionmakers from agencies with various management responsibilities in NWHI were asked to rank from "most favored" to "least favored" thirteen combinations of four policy alternatives and four commercial fishing management regimes.

The policy alternatives were:

- No commercial fishing development in NWHI
- Development of a fisheries support facility at Midway Islands
- Development of a fisheries support facility at Tern Island in French Frigate Shoals
- Stationing a "mothership" stationed in NWHI for fisheries support

The commercial fishing management regimes would not allow fishing in the following areas:

- Shoreline regime (defined as the refuge boundary)
- Ten-fathom regime (up to ten-fathom deep)
- Twenty-fathom regime (up to twenty-fathom deep)
- Three-mile regime (up to three miles)

Three of the original 16 combinations were dropped. These concerned the Midway Islands facility combined with the first three nearshore fishing regimes listed above. The three choices were not considered because the type of fishery associated with a Midway Islands facility is primarily for albacore which takes place far beyond the 3-mile boundary.

The decisionmakers were grouped according to their agencies' mandates into one of two "coalitions": fisheries development or wildlife conservation.

The results of the study may surprise some in that while members of the wild-

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Jack R. Davidson, Director **Richard Klemm, Editor**

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life conservation coalition generally supported conservation policies, members of the fisheries development coalition were split in choices between conservation and fisheries development policies. Thus the policy-regime choices ranked highest were the no development/three-mile regime, and the no development/ten-fathom regime. However, according to Miller, data from the study suggests that with some compromises between the two coalitions that the Midway Islands support facility/three-mile regime could become the "most favored" choice. Decisionmakers ranked this choice high because it would have little perceived negative impact on refuge wildlife and ecology and would increase albacore landings, bringing additional revenues to the state.

The least favored policy alternative was the Tern Island facility, and no compromises could likely yield a consensus for it. □

Cures from the Sea

by Susan Pirsch

Nature is one of the key sources for leads to the development of new medicines for the treatment of human ailments. Researchers are particularly interested in marine organisms, especially those appearing to lack physical defenses. Some of these plants and animals use chemicals to ward off predators.

One organism currently being studied is the sea hare, a small, shell-less sea snail. The sea hare eats a certain algae from which it takes and accumulates a toxin for its defense. The sea hare stores the toxin in its mantle and, when approached by a predator, releases it.

Researchers have analyzed the chemical structure of the sea hare secretions and have isolated, among other things, cytotoxins. Cytotoxins, when applied to cells, can severely damage or kill them.

"Any substance that has the property of killing cells can potentially lead to an anticancer drug," said Dr. Paul Scheuer, professor of chemistry at the University of Hawaii. " This is one of the leads we are currently pursuing."

Scheuer and his coworkers have not yet isolated any cytotoxins from sea hares around Hawaii. But, some substances isolated from marine organisms found while using the university's tiny, two-man submarine the *Makali'i*, may some day further pharmaceutical developments, he said. Scheuer's work is funded, in part, by the University of Hawaii Sea Grant College Program.

"There is no one else in the world—as far as we know—who has access to organisms that live 350 meters below the surface. There is a good chance there are many [pharmaceutical] treasures buried down there in marine invertebrates."

One treasure may be buried in the chemical structure of a horny coral called a gorgonian. About 15 years ago, researchers analyzing gorgonian coral taken from the Caribbean Sea, discovered large concentrations of prostaglandin, a powerful hormone previously thought to occur only in mammals, he said.

"The discovery created a flurry of excitement among researchers in the field," Scheuer said. In humans, prostaglandin is known to lower blood pressure, regulate uterine contractions in pregnant women, and speed up the formation of blood platelets, which are associated with blood clotting.

In the pharmaceutical industry, the hormone has great potential for leading to the development of new drugs. However, because of the broad spectrum of physical effects produced when the hormone is given, progress in that direction

Boat Dies on Reef. *This photo was taken on May 26, a day after the* Nightingale, *a 75-ft commercial fishing boat, ran aground near Eastern Island of the Midway Islands. Its estimated 9,470 gallons of diesel fuel, 150 gallons of hydraulic fluid, and 200 gallons of lubricating oil spilled but were fortunately carried out to sea. None of the Hawaiian monk seals, green sea turtles, or other wildlife observed in the vicinity appeared to be harmed from the incident.*

As commercial fishing increases in the Northwestern Hawaiian Islands, concerns about more incidents like these will grow, too.

—U.S. Coast Guard photo

has been slow, Scheuer said. Researchers are currently looking for ways to change prostaglandin so drugs aimed at specific problems can be developed.

But the process of making clinically useful drugs takes a long time, Scheuer said. First, enough organisms to extract enough substances for study must be collected, their chemical structures analyzed, and promising pharmaceutical substances identified and isolated. Finally, the substances are tested on mice and other mammals, and if all goes well, humans.

More than half of the pharmaceutical drugs in use today were developed after this same process was applied to land plants and animals. But, instead of continually harvesting the organism for a substance, researchers work on developing a synthetic compound that can be mass manufactured.

Even when using leads provided by organisms, the development and manufacture of useful drugs takes a long time and a lot of money. An article in the summer 1979 issue of *Oceanus* reports that the estimated cost of this process is $50 million and takes at least 10 years.

In one instance, 25 years passed before substances isolated from a sponge were tested clinically, Scheuer said. A professor at Yale University successfully isolated Ara A, an antiviral substance and Ara C, an anticancer substance from a species of sponge more than 30 years ago. Just 5 years ago the two drugs reached the stage of clinical testing. Ara A has been proven effective as an antiviral drug and Ara C, as an inhibitor of the growth of cancer cells, Scheuer said.

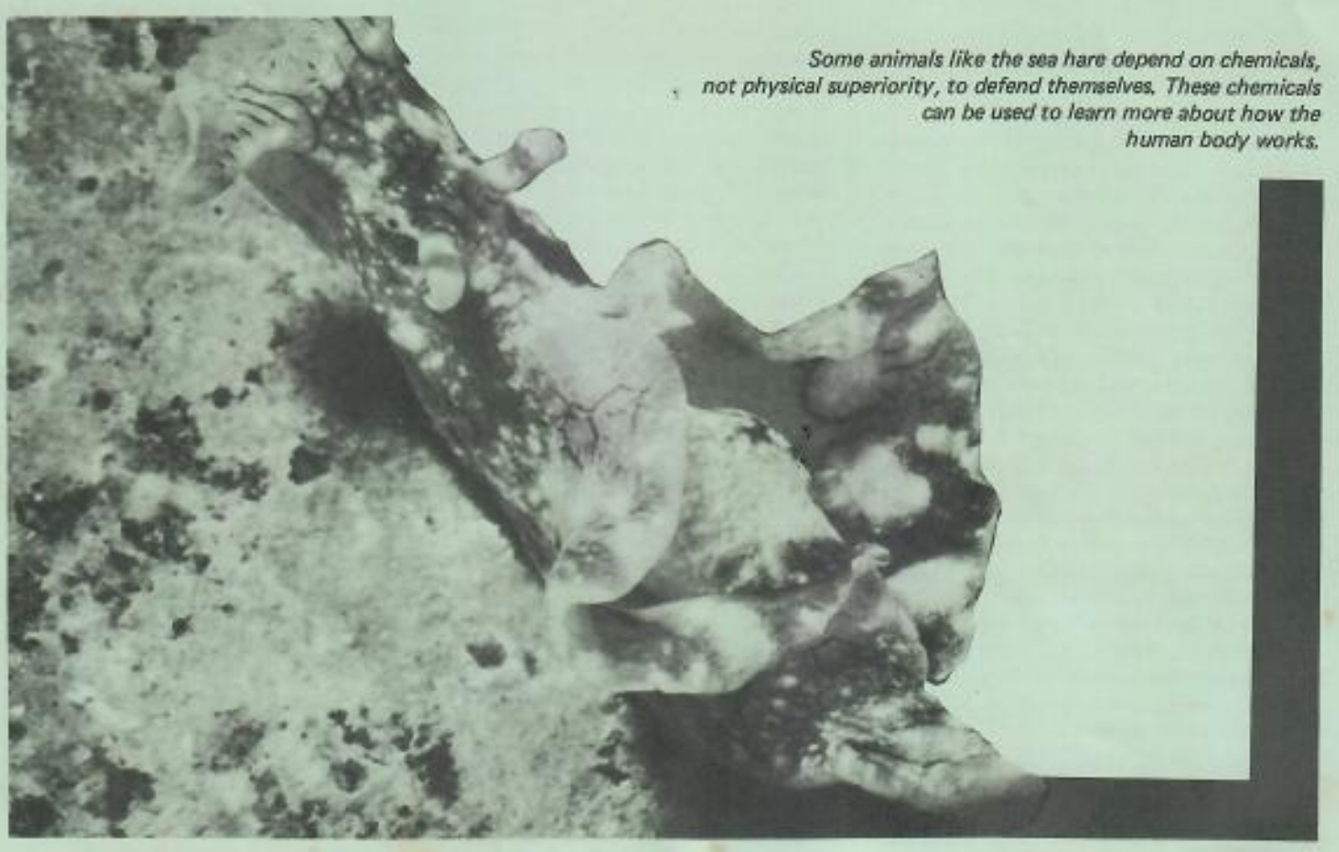
Some substances isolated from marine organisms are not destined for drug store shelves but are useful tools for furthering the understanding of the way the human system works.

The toxin produced by the puffer fish, for example, is known to block certain channels through which nerve impulses are transmitted. After analyzing the toxin molecule and determining its size and shape, researchers were able to infer the size and shape of the nerve channel it obstructs, Scheuer said.

Some substances from marine organisms may one day even have a place on supermarket shelves. Scheuer's group is currently looking for blue pigments in marine organisms for use as food coloring. So far they have isolated some "beautiful blue pigments" from gorgonians and are now working on determining the substance responsible for the color, he said.

New and useful products can sometimes be developed by careful observations and using marine organisms as a model. In Japan, it was known that flies landing on a type of sea worm used for fishing bait die instantly. Curiousity sent researchers into the lab and after they isolated the active substance, a new insecticide was developed that has been on the market since 1967.

Although the process of finding, testing, and developing new products from marine organisms is costly and takes time, Scheuer is optimistic that before long the study of these organisms will yield new products for the market. He predicts that within the next 10 years, "more than one drug that traces its ancestry to marine organisms will be used in the United States." □



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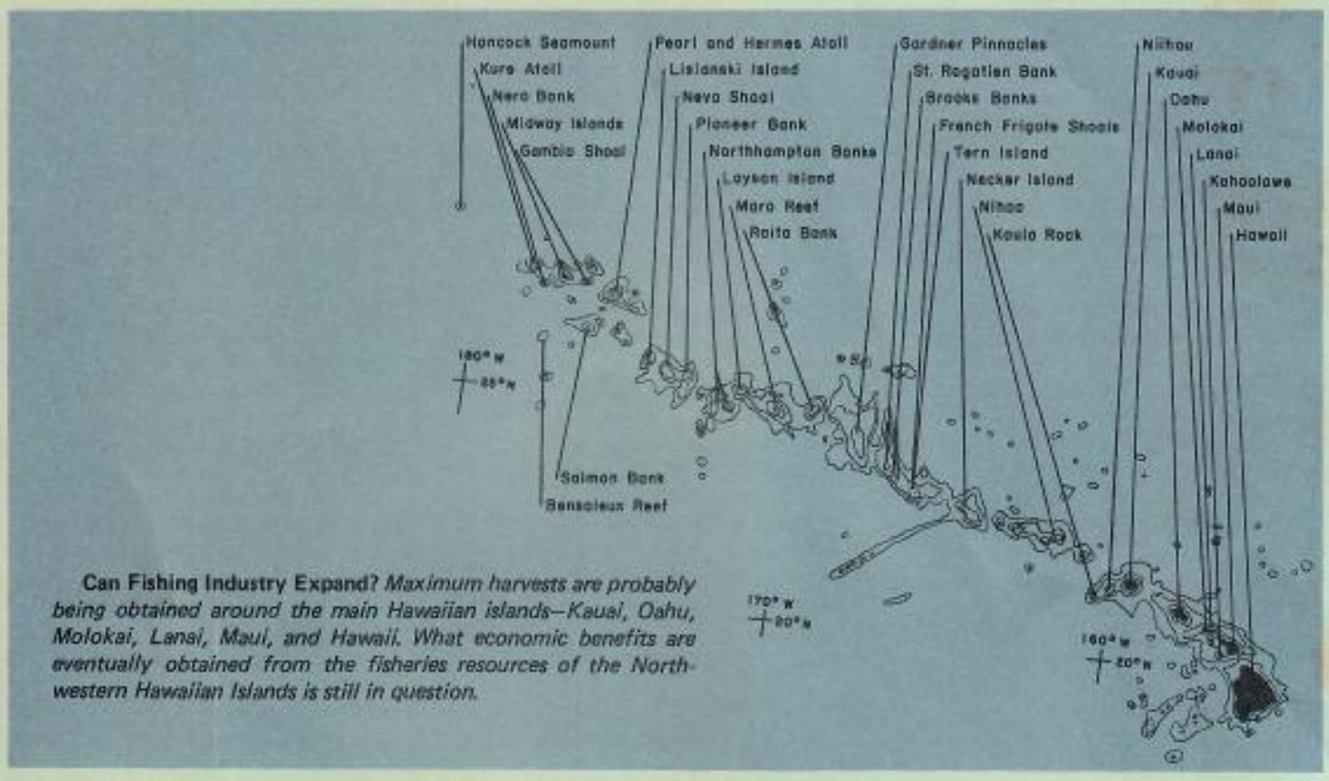
NWHI Fishing Opportunity *(Continued from page 1)*



Can Fishing Industry Expand? *Maximum harvests are probably being obtained around the main Hawaiian islands—Kauai, Oahu, Molokai, Lanai, Maui, and Hawaii. What economic benefits are eventually obtained from the fisheries resources of the Northwestern Hawaiian Islands is still in question.*

in expanding the industry by tapping the resources of the relatively pristine NWHI fisheries.

The question remains, however, whether any species in NWHI besides albacore can be harvested profitably. Spiny lobsters, for example, are not as abundant as hoped for. Bottomfishing for current markets may only be marginally profitable, according to research findings. Part of the answer to the question of profitability may also lie with overcoming problems typical in new fisheries: creating new markets (in this case, especially for frozen seafood), setting up service facilities to support fishing activities, overcoming distance to market, etc.

In symposium discussions related to fisheries and conservation management of NWHI, the establishment of fishing support facilities was one of the dominant topics. Some believe that fishing support facilities in NWHI are necessary to achieve profits for fishermen and economic development on a scale important to the state.

For some, an ideal circumstance might be to have a fishing support facility at Tern Island in French Frigate Shoals and one at Midway Islands. The Tern Island facility could serve nearshore fishermen engaged in multi-fisheries operations. For example, outward bound boats could deliver harvested fish for the frozen market to the support facility, refuel, resupply, and rest. On the homeward trip, fish for the fresh market could be harvested. A Midway Islands support facility could be similarly operated for albacore and other distant water fishermen.

When, if at all, either of these facilities is likely to be built remains uncertain. Of the two, a Tern Island facility is least likely to be built. The island lies within the national wildlife refuge where conservation policies prohibit such an activity. (The existing facilities on the island currently provide emergency help for fishermen.)

The prospects for a Midway Islands facility are brighter at this point. The U.S. Navy is currently reviewing a state proposal for a mothership facility to be based there. A mothership set up at Midway Islands in 1979 shipped about 2,000 tons of frozen albacore to the cannery in Honolulu.

But for the present, commercial fishermen who wish to try their luck in NWHI will have to do so without the benefit of a full-scale support facility. The consensus seems to be that fishermen with boats in the 50 to 70-ft range engaged in multi-fishing operations have the best chance for success.

On the flip side of the joint use issue are concerns about the potential effects extensive commercial fishing—should it reach this stage—might have on the conservation and preservation of wildlife in the refuge.

For example, the millions of seabirds in NWHI consume an estimated 900 million pounds of seafood annually. If fishermen competing for the same seafood deplete this resource, bird populations would likely fall. The indirect effects of fishing in NWHI such as the introduction of exotic predators and other environmental disturbances could affect seabirds as well.

Even the land plants and animals of NWHI could be affected by fishing activities. The introduction of ants, cockroaches, and plant seeds by fishermen (and by other people, too) going ashore could have catastrophic consequences on the fragile island ecosystems.

The research data gathered over the last 5 years will serve as an important information base from which to make decisions about the use of NWHI in the future. □

MARINE MISCELLANY

ARTIFICIAL REEF CONFERENCE

The 3rd International Artificial Reef Conference will be held at the Registry Hotel in Newport Beach, California from November 3 to 5.

Subjects such as cost effectiveness of artificial reefs, reef designs for target fish species and fishery management considerations will comprise a part of the nine panel sessions to be conducted.

For more information write to TIARC-Occidental College, Department of Biology, 1600 Campus Road, Los Angeles, California 90041.

FULL FUEL TAX CREDITS AND REFUNDS FROM IRS

Commercial fishermen can now file direct claims with the Internal Revenue Service to obtain full credit or refund on federal excise taxes on gasoline and diesel fuel. Before the Highway Revenue Act of April 1, 1983, fishermen had to go through their dealers or producers to receive a full credit or refund.

Credit claims should continue to be filed on IRS Form 4136 and attached to the fishermen's income tax return. (*Industry Services Update,* Office of Industry Services, National Marine Fisheries Service, June 1983)

YEAR OF THE OCEANS

Dr. John V. Byrne, administrator of the National Oceanic and Atmospheric Administration (NOAA) has proposed making 1984 the Year of the Oceans.

During his speech at Coastal Zone '83, in San Diego, Byrne said 1984 should be devoted to defining the United States goals concerning the use of coastal and marine areas.

He urged joint efforts by state and private organizations to develop strong marine programs that will help the federal government devise management plans for these areas.

LAW OF THE SEA PAMPHLET AVAILABLE

The Texas Sea Grant Program has recently published an update primer on the Law of the Sea Treaty signed by 117 United Nations members at Montego Bay, Jamaica in December 1982. The 12-page pamphlet "The Law of the Sea Treaty and the United States," provides a history of the treaty negotiations over the last 15 years.

The complex treaty will affect ocean boundaries, commercial fishing, deep seabed mining for manganese nodules, navigation and shipping, pollution control, and scientific research. The United States was one of four nations voting against the treaty; seventeen other nations abstained from voting. The U.S. and several of the abstaining nations were dissatisfied with provisions in the treaty regarding manganese nodule mining.

Single copies of the pamphlet are available free by writing to Marine Information Service, Sea Grant College Program, Texas A&M University, College Station, Texas 77843. □

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Decline in Hawaii aku catch blamed on purse-seine fishing

TINIAN POINT, Guam — Wadsworth Yee grimaced as he watched the tension go out of the line and the large marlin leap free. It was the end of four hours on a charter boat chasing aku schools in the choppy waters off Guam.

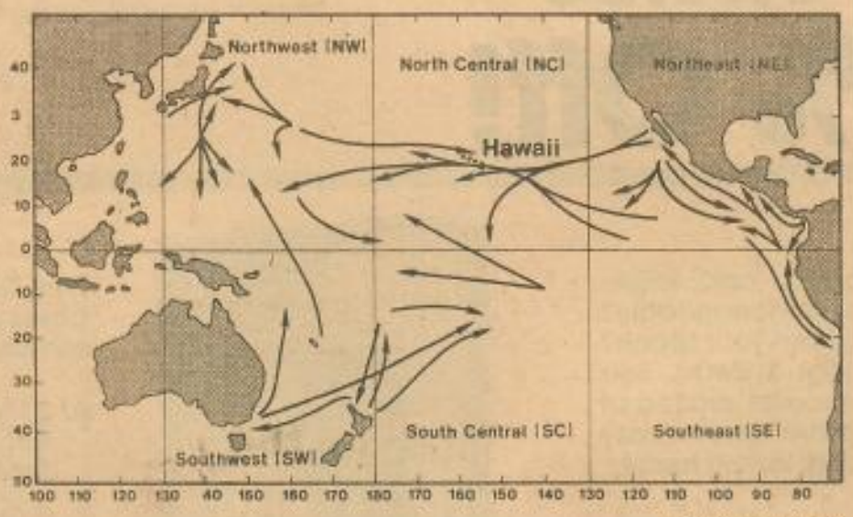
The boat was chasing the aku schools because it is well known that blue marlin and other fish feed on stragglers from the schools. In this case the captain's strategy paid off and a marlin struck just before dusk, but the large fish twisted off the hook and now there was nothing to be shown for the effort.

"I've been fishing out here for 10 years," Yee said later, "and never once have I been skunked. We didn't even see a mahimahi or anything and that tells you something. What happened to the fish?"

There is never any guarantee that a boat will catch fish but Yee, the chairman of the Western Pacific Fisheries Council, worries that the chances of making good catches in the Pacific are being steadily reduced by the large purse-seiners that are now fishing the western and central Pacific.

The purse-seiners have replaced old-fashioned boats that used fishing poles rather than large nets.

As Yee explained, "What I gather from talking to people in Guam concerned with commercial fishing, all seems to indicate a tremendous reduction in the number of fish being taken. They feel that it is the large catches by purse-seining boats from the U.S., Japan, Korea and Taiwan that are causing the problem.



Advertiser newsmap

Map shows confirmed long-distance migrations of tagged aku. Base of each arrow shows where fish was tagged and arrow's point shows where fish was subsequently caught.

from the sea

mike markrich

"When they set their nets to catch schools of aku, they catch a lot of baby fish that don't get a chance to grow up, like baby marlin, mahimahi, ono and other fish that follow the pelagic (open ocean) stocks."

According to a new report on skipjack tuna by the National Marine Fisheries Service, there has been a sevenfold increase in the take of aku in this area of the western-central Pacific in the last 10 years — an increase that experts say is caused by the efficiency of the large purse-seining vessels that intercept and capture entire schools of aku with their great nets.

Some scientists say the 300,000 metric tons or 661 million pounds of fish now being taken in the western-central Pacific — making up nearly half of the world's total catch — represents only a small amount of the total available. Others, such as Yee, are not sure that such heavy unrestricted fishing is such a good thing.

Aku are believed to spawn in the central Pacific, then flow with currents to feeding grounds off South America where a significant percentage then migrate back to the central Pacific on other ocean currents that bring them past Hawaii. There is some concern among biologists and people in the commercial fishing business that taking too many aku in the central Pacific will cut down on the number that ultimately make it to Hawaii.

Hawaii aku fishing is currently at its lowest level since the start of large-scale commercial fisheries here in the 1920s and '30s and some people have noticed a sharp reduction in the number of large "seasoned" aku caught here.

But James Joseph, the director of the Inter-American Tropical Tuna Commission in La Jolla, Calif., an internationally recognized authority on tuna, said more information is needed to determine if there is a "cause-and-effect" relationship between heavy fishing in one place and a lack of fish somewhere else.

He did acknowledge that the tremendous drop in Hawaii aku stocks that began in 1979 followed the heaviest aku fishing ever recorded by purse-seiners off Central and South America in 1978.

Joseph cautions, however, that the information is incomplete and that purse-seiners do not seem to be any worse on fish stocks than other kinds of fishing such as pole and line which, he said, leave the fish "just as dead."

Bob Skillman a fisheries service aku specialist, said all kinds of fishing boats discard fish that they don't want because "you can't target any one species." But purse-seiners are more efficient; they catch more and therefore discard more than a boat that uses bait.

Skillman said there are "natural fluctuations in every population." In the last four years, the Hawaii catch has been approximately 3 million to 4 million pounds per year. Previously, the rate fluctuated between 4 million and 13 million pounds a year.

He said other factors could be responsible for the change, such as ocean currents taking fish away from Hawaii.

The decline has seen the Hawaii aku boats' daily catch drop from 10,000-15,000 pounds per boat to sometimes less than 4,000 pounds, according to Capt. Richard Kinney of the Lehua. Aku prices have dropped to their lowest point in recent years because of the tremendous number of tuna on the market.

The U.S. companies are not required to report how much fish they catch and the Japanese stopped giving out their catch reports in 1979 when they realized that the data might be used to restrict them.

Yee wants to see some kind of international treaty for skipjack in the Pacific that would regulate the number of fish taken "before there are no fish left to catch." Similar treaties have protected fish stocks in other parts of the world.

Hawaii Seafood Consumption

By Harry Whitten
Star-Bulletin Writer

The people of Hawaii eat twice as much seafood as the national average and fresh fish is preferred, a seminar of the National Fisheries Institute was told yesterday.

The institute's annual convention is being held through Friday at the Sheraton-Waikiki Hotel.

Paul Bartram, management development specialist with the Western Pacific Regional Fishery Management Council, told the seminar about fisheries in Hawaiian waters and in the Western Pacific and about fish preferences in Hawaii.

He referred to a council leaflet which said most locally harvested fish goes into the fresh fish market but that an equivalent share of the overall seafood market comes from imported frozen seafood.

One way in which local fishermen are dealing with competition from imports is by exports of fresh and fresh-frozen fish, which now amounts to almost 8 percent of the total trade.

BARTRAM TOLD the seminar that "there is a bewildering variety of species in Hawaiian waters, more than 600 species, but only 10 percent of them enter into the commercial market."

He said that there is a pronounced seasonal change in species available in the Pacific islands, which emphasizes the need for substitutes in the local market.

"Our objective is diversity," he said.

He told the seminar about the tuna, mahimahi, wahoo or ono, billfish, bottom fish and crustacean fisheries in Hawaiian or Western Pacific waters.

The deepsea fishery has the most potential, and most of this potential is in tuna, which is as important in the Western Pacific as salmon is in the Eastern Pacific, he said.

Skipjack tuna comprises most of the catch from purse seiners, but skipjack landings are declining, he said. The skipjack ends up in cans.

Wednesday, May 2, 1984 Honolulu Star-Bulletin A-11

Is Twice National Average

There is an expanding market for sashimi, with bigeye tuna preferred, Bartram said.

Most mahimahi is caught by trolling vessels and about everything caught in local waters is sold here. The demand is such that restaurants and other outlets use 10 times as much frozen mahimahi, mostly imported from Taiwan, as fresh mahimahi, although the quality is not nearly as good, he said.

A LOCAL success story involves wahoo or ono, the price of which has increased from 75 cents a pound in 1975 to $2 a pound today, he said. Restaurants promote it as a substitute for mahimahi. There is a small market for frozen ono.

Bottom fish, such as snappers, groupers and jacks, have good shelf-life, he said.

Spiny lobsters from the Northwestern Hawaiian Islands form a small fishery, but it is unstable, with the number of vessels declining from 10 to four last year, he said. Only 200,000 to 400,000 lobsters are caught there each year, a small number compared to lobster fisheries in other areas.

Bartram said that considerable interest has been aroused by deep sea shrimp, caught in waters from 150 to 400 fathoms.

The period of high quality is short, however. The high perishability and the fact that half of the shrimp consists of the head pose marketing problems, Bartram said.

In answer to questions, he said no one knows how much shrimp there is out in the Pacific nor what the impact of heavy shrimp fishing would be.

Taiwan Crew Headed Home

By Jim McCoy
Star-Bulletin Writer

The Taiwanese fishing vessel Yang Tong No. 3, impounded since the Coast Guard caught its crew fishing within the 200-mile limit April 22, left Honolulu yesterday after $90,000 was paid to the U.S. government.

The out-of-court settlement was paid in part by a Honolulu woman who became the honorary "mother" to 19 crewmen while they were stranded penniless in Honolulu for five weeks.

"They're so happy to go home," said an obviously relieved June Ju Hsieh, a businesswoman who put up about 60 percent of the settlement and who housed and fed the crewmen for most of their stay here.

The remaining 40 percent was provided by Hsieh Kai Ho, the "mayor" of Makwong village on the island of Pen Hu, the fishermen's home which is located about 30 miles off the coast of Taiwan, Hsieh said.

Hsieh and the "mayor" are cousins.

THE SETTLEMENT was announced yesterday afternoon, and several hours later the Yang Tong departed the Sand Island Coast Guard station, where it has been impounded since arriving here under Coast Guard escort in early May.

The Coast Guard cutter Point Harris seized the 92-foot vessel April 22 in waters 1,650 miles west of Honolulu. The vessel was 165 miles northwest of Kure Atoll, and the government said in a complaint that the crew was fishing without a permit inside the 200-mile limit set by the federal Fishery Conservation and Management Act of 1976.

The "fishing" was in the form of "coral dragging" in which crewmen used large rocks attached to cables to drag live beds of coral in order to harvest semiprecious pink coral.

Some 600 pounds of pink coral was found aboard the vessel and placed in a warehouse at Sand Island. According to yesterday's agreement, the coral has been forfeited. A Coast Guard spokesman said yesterday no decision has been made on what to do with the coral.

THE WRITTEN settlement agreement on file in U.S. District Court skirts the issue of whether any violations of the fishery act occurred.

Roy Kodani, attorney for the vessel's owner, Tong Shing Co. of Pen Hu, maintained no violations occurred, but added the settlement was reached to avoid an expensive trial.

Assistant U.S. Attorney Elliot Enoki would only say that the seizure of the vessel and the filing of the complaint by the government "indicates the Coast Guard regards this as a very serious problem and they won't overlook any (fishery act) violations."

It was the second time since the fisheries act became law in 1976 that a foreign vessel paid an out-of-court settlement in a Hawaii case. The owners of a Japanese fishing vessel seized in May 1978 off Kure Atoll for fishing without a permit paid $50,000.

Kodani credited Hsieh with providing the means to reach the settlement. Hsieh, who has lived in Hawaii since 1976, runs Trans World Enterprise, an import-export business, and is a realtor with Ulieny Properties.

SHE THANKED Hawaii senators Daniel Inouye and Spark Matsunaga for being a "big help in trying to help us."

Hawaii's community, responding to news stories about the plight of the crew, also donated food and $1,650 in cash, which Hsieh said was evenly divided among the crewmen to be used as spending money.

Hsieh also called on her brother, who runs a restaurant, for help and on Dr. David Lee Pang of Nuuanu Clinic, who gave free treatment to the men when they came down with the flu and stomach ailments.

Hsieh said she paid some $15,500 for food, movie tickets and other expenses for the 19 men. She said she got a $50,000 loan from the Bank of

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as Benefactors Pay $90,000

Hawaii by mortgaging her house to go toward payment of the settlement.

She said she hopes to be eventually paid back by the ship's owner.

Hsieh said she helped the fishermen because "I just love to help people."

HSIEH, WHO IS a licensed pilot, is called "the first and only lady pilot from the Republic of China" by the people of Pen Hu, she said. Because of this, she is respected and looked to for help and guidance, she said.

She is also respected, she said, because she donated money she earned as a teacher a few years ago to the local orphanage.

Hsieh said as an immigrant she understood the problems the fishermen would face in a foreign country, and so she did what she could to ease their anxieties.

The men were moved six times by Hsieh from home to home, in part, Hsieh said, to avoid "strange people" who she said were politically opposed to the policies of Taiwan.

Attorney Kodani said the fishermen experienced the "aloha of the people here" after they spent their first night here in Halawa jail. On the second night they were about to sleep on the steps of the federal building when they were rescued by mechanic Jimmy Chen.

HOMEWARD BOUND—Crewmen from the Yang Tong No. 3 bid farewell to local friends and newsmen as their six weeks in Hawaii ended yesterday. —Star-Bulletin Photo by Dean Sensui.

Albacore remains an unexp

from the sea

mike markrich

Henry Sakuda admits that the state's plan for establishing an albacore fishing station on the Navy-controlled Midway Island is temporarily "on a back burner."

Castle & Cooke no longer will process this long-finned tuna here — which makes the state's effort to attract fishing boats from the West Coast to Hawaii more difficult. Sakuda, chief of the state division of aquatic resources, said attempts to negotiate an agreement with the Navy for a more permanent Midway fishing base have a lower priority now.

But albacore is still an unexploited resource for the United States in the North Pacific and there is hope that a new tariff on foreign albacore being proposed by Sen. Daniel Inouye may help the state's long-term plans to establish Honolulu as an important fishing port.

According to a recent study by the state Department of Land and Natural Resources, in 1981 Japanese fishing boats caught 114,000 tons of albacore (tombo) approximately 600 miles north of Midway while U.S. boats caught only 32,000 tons.

Of the five nations fishing for albacore tuna in the North Pacific, the Japanese caught 72 percent of the total number of fish between 1952 and 1979, according to the report, which was released in April.

As a result of this and the low tariff on imported tuna packed in water, only one can in 10 of the $500 million worth of canned albacore sold in the United States was caught by American fishing boats.

But Inouye's proposed legislation could change that. He wants to plug what he describes as a "tariff loophole."

He explained that, as the result of a 1943 treaty, there is a 35 percent tariff on all tuna packed in oil but only a 6 to 12 percent tax on tuna packed in water.

(At the time the duty was imposed, most exported tuna was packed in oil; only cheaper grades were packed in water. But American tastes changed and high-quality tuna is now packed in water.)

Foreign countries, especially Japan, "shelter their markets and subsidize their producers" so that it is hard for U.S. producers to compete, Inouye said. He said his proposal will "prevent the collapse of the U.S. tuna industry, an event that would be a serious blow to Hawaii's economy."

A National Marine Fisheries study quoted in the state report estimates that despite a reported reduction in fishery stocks, the albacore in the North Pacific adjoining Midway can withstand an additional 10 percent catch without being seriously affected.

That means that, if it could be made economical, U.S. boats could potentially catch a greater share of fish than they are catching — fish that could be brought back to Hawaii for processing of trans-shipment to the Mainland.

In 1979 the state was granted permission by the Navy for one year to operate a "mother ship," offering fish storage and other services to fishing boats that were working in these waters more than 1,000 miles from Oahu.

As a result of the mother ship operation and changes that were taking place in the fishing industry on the West Coast, many albacore boats from the Mainland came to Hawaii and the state's catch rate rose dramatically.

Hawaii's albacore catch rose from 39.5 short tons in 1977 to 388 short tons by 1980. The state report indicates that even after the experiment was finished, interest in Midway continued. The Hawaii catch rate for 1982 was more than 100 times the average of the previous 17 years.

According to Peter Simons, a staff aide to Inouye, the Navy has indicated an interest in negotiating a more permanent arrangement with the state for a Midway fishing base.

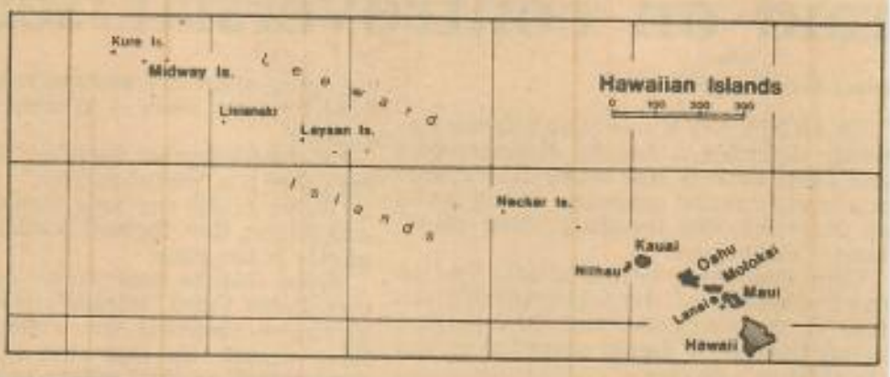
However, Pat Rose, president of Castle & Cooke's San Diego-based Bumble Bee Tuna division (and part of a management group that has signed a letter of intent to buy Bumble Bee from parent C&C), cautioned against over-optimism.

Interviewed by telephone, he said that most U.S. albacore, known as "white meat" tuna, is caught in the Atlantic, processed in Puerto Rico and sold on the East Coast. It has a higher market value than the so-called "light meat" — all the other species of tuna — but is sold in fewer places. He added that he thought the North Pacific tuna was of an inferior grade and smaller than other albacores.

But state Rep. Richard Matsuura, chairman of the House Committee on Ocean and Marine Affairs, is undeterred. He has been a prime supporter of the Midway project and has been instrumental in getting the Legislature to appropriate $225,000 on Midway Island studies.

Matsuura said he believes that albacore could be marketed and sold to more people in the United States and that it is important to protect the U.S. and Hawaii fishing fleets with tariffs. He said that, if the fishing industry is allowed to go under, the nation runs the risk of becoming totally dependent on foreign countries to supply it with fish.

loited resource for U.S.



Midway Island: state's hope for a fishing station.