HAWAIIAN MISC.
ARTICLES 1980s-2000s
GEORGE BALAZS FILE

11/8/04 THA A1

'Uncle Solo,' a son of Hawai'i, laid to rest in ocean off Kailua

BY VICKI VIOTTI
Advertiser Staff Writer

Solomon Kalapawai Mahoe Jr., a son of the Hawai'i of bygone days, left a small bit of himself in many people, some of whom are scattered to the four corners of the globe.

"He had the capacity for being thrilled with all that was going on around him," his daughter Nani Mahoe said. "His friends probably number in the thousands."

However, those who gathered at his Kailua family home Saturday to bid him a fond farewell were an intimate group by Hawaiian standards, only about 150 or so. Even during the planning phase, weeks in advance, his daughter knew it would be an emotional occasion.

"Hawaiians have a way of singing and dancing and laughing and crying, a catharsis," she said.

Yesterday, in a private family observance, the tapa-decorated urn containing his ashes was sunk in the sea off Kailua Bay that he loved as much as his life on land. About 30 people took part in that ceremony, Nani Mahoe said.

The sense of loss, she said, is profound for those who knew him. Even for those who didn't, the Sept. 25 death of "Uncle Solo" should be noted, his daughter said, because he represented a way of life that is ebbing rapidly.

Photo courtesy Mahoe family

Solomon Kalapawai Mahoe, shown here as a young man, was an "ambassador of good will."

"My father was like an ambassador of good will," Nani Mahoe said. "He took his culture with him and was very engaging. He had that personality so that people were drawn to him."

The official records showed Solo Mahoe to have been 90, she said, but he often claimed to be a year older than that. In any case, he was his parents' first-born child and, by tradition, was given to his grandparents to raise.

So the customs he learned, the outlook on life, were far older than his years.

He was a native speaker of Hawaiian, Nani Mahoe said, and grew up in Maunawili, then a mix of rice fields, banana groves and papaya trees.

"Daddy's early years in Hawai'i were idyllic," she said. "He says it was so quiet that he could hear his tūtū's whistle to call him home.

"Daddy rode his horse everywhere, down to the beach, up over the Pali to town ... everything moved at its own natural pace."

Through his life he worked as a Waikīkī lifeguard, raised pigs, owned a lunch wagon with his wife, was a civilian public works employee during World War II and a city roadwork foreman thereafter.

If such activities constituted his livelihood, fishing was his life. At a Kailua town reunion almost two decades ago, he recalled learning to fish with his

SEE MAHOE, A2

Mahoe

CONTINUED FROM A1

grandfather, setting out in a boat on Kawainui Marsh, which in those days was an open lake.

Solo's middle name refers to the land, near the beachside shop of the same name, owned by the Mahoe clan for many years. He knew of countless spots for fish, lobster and octopus, Nani Mahoe said.

"We are told that our 'aumakua (family god) was the shark, and as such, offerings were made to the manō at a special family shrine close to Kāne'ohe Marine Base," she said.

A grandnephew, the well-known kumu hula Chinky Mahoe, said "Uncle Solo" would befriend just about anyone he encountered, including the tourists who found their way to Kailua Beach, then considered a remote location.

"Today, you don't find people having the aloha that he had," he said. "He just gave freely. There's not too many people that will hang out by the beach and entertain the tourists."

He married the former Mona Park; the couple had three daughters — not counting the many hānai kids adopted into the household.

"I remember as a child my father swimming in dark blue ocean with sharks," Nani Mahoe said. "I watched the top fin cut through the water, frightened. Daddy reminded me that I should not be afraid of the shark — they would not hurt us.

"However, I told him that I was only half-Hawaiian and maybe the shark would only see the Korean in me."

He was widely traveled, bringing his Hawaiian language and culture with him. Nani said he outlived almost all his contemporaries, leaving only a half-brother among his elder 'ohana. His friends at the end of life were largely the children and grandchildren of those befriended decades earlier.

"He felt his life was one of fun," she said.

At the ceremony at her home on Saturday night, there were many remembrances, song and stories about Solo Mahoe. "Good fun," was a phrase heard many times. "It was good fun," the people who remembered Solo said. "All good fun."

At the conclusion of the celebration, Nani performed a hula in memory of her father. The title was "I'll Remember You."

Then yesterday, his friends and family took his ashes out onto Kailua Bay.

Solo Mahoe had chosen as his final resting place a large ginger jar with tapa print.

"He said, 'This is going to be my house.' And he was specific, telling us to attach the lid but not seal it. This is so when he was ready to leave he could get out," Nani said.

"He said, 'When I'm ready to leave, I want to frolic in the ocean, tickle the ladies and sun on the beach."

Staff writer John Windrow contributed to this report. Reach Vicki Viotti at vviotti@honoluluadvertiser.com or 525-8053

Pentagon admits to germ warfare tests in Pacific

Star-Bulletin staff and news services

WASHINGTON >> The U.S. military used two kinds of nerve gas and a biological toxin in tests on Navy ships in the 1960s, the Pentagon has acknowledged for the first time. Officials said veterans harmed by exposure to the agents could be eligible for health benefits.

The four tests in the Pacific from 1964 to 1968 used either the deadly nerve agent sarin, the nerve gas known as VX or a biological toxin that causes flulike symptoms, Defense Department statements said.

According to a Star-Bulletin story published in November, a spokeswoman from the office of U.S. Rep. Mike Thompson (D-Calif.) said members of the Department of Veteran Affairs had contacted their clinics nationwide informing them that veterans "who may have been exposed to these tests need to be evaluated."

Earlier, a veteran contacted U.S. Rep. Neil Abercrombie (D, Honolulu), a member of the House Armed Services Committee, inquiring about the tests.

The tests, conducted on barges, tugs, destroyers and other ships, were to test the weapons themselves, protective gear and decontamination procedures.

killed to determine whether they were exposed to the weapons, Kilpatrick said.

Tests in 1964 and 1965 used VX, another deadly nerve gas. For the "Fearless Johnny" tests in 1965, the George Eastman was sprayed with VX and a simulant to test decontamination procedures. In the Flower Drum Phase II tests, VX gas tagged with radioactive phosphorus was sprayed on a barge to test decontamination procedures.

That second test used a compound that was 90 percent VX — "the most lethal nerve agent" and one that can linger for weeks, Kilpatrick said. But there is no evidence any people were on the barge sprayed with VX, which was towed nearly a half-mile behind a tugboat, he said.

A 1968 test used staphylococcal enterotoxin Type B — a poison produced by bacteria that causes flulike symptoms such as fever, muscle aches, cough, vomiting and diarrhea.

During that test, the toxin was sprayed from tanks on airplanes over five tugboats, the USS Granville S. Hall and some parts of the Eniwetok Atoll in the Pacific. The test was to evaluate how the toxin — meant to incapacitate soldiers for up to two weeks without killing them — could be spread from the air.

Sketchy records of the tests and ships' logs do not indicate any of those involved in the tests suffered serious health problems at the time, said Dr. Michael E. Kilpatrick, a Defense Department health official.

"It may not be the best, but we believe if anything catastrophic happened or if there were large numbers of ill people, it would be in the log," said Kilpatrick, who was involved in reviewing the records.

The Department of Veterans Affairs has mailed letters to about 600 veterans who may have taken part in the tests, VA Secretary Anthony Principi said. Any who were harmed by the chemicals could be eligible for VA benefits.

The tests also used chemicals and bacteria meant to simulate weapons, as well as fluorescent or radioactive chemicals used as tracers, the Defense Department said. One type of bacteria used to simulate germ weapons was later found to cause infections, and a separate test where that germ was sprayed on San Francisco is believed to have caused an infection that killed a man.

The tests were among 113 conducted as part of a project called SHAD, or Shipboard Hazard and Defense.

Sarin, the deadly nerve gas used by a cult to kill a dozen people in a Tokyo subway in 1995, was used in a 1964 test codenamed Flower Drum Phase I off the coast of Hawaii. Both sarin and a chemical simulant were sprayed onto the USS George Eastman from a turbine on the ship's bow and injected into the ship's ventilation system, the Pentagon statement said.

In 1963 a project called Autumn Gold was conducted about 60 miles off Oahu. According to the Department of Defense, "the tests involved military officials who were exposed to chemical agents meant to simulate the effects of deadlier germs such as anthrax."

Crew members wore gas masks during the tests, and those who worked most directly with the sarin wore chemical protection suits, the statement said.

Monkeys were used as test subjects during the exercises using nerve gas and were later

'Heroic' attempt to hatch 124 eggs

❑ Too cold in Hilo, so turtle eggs are moved to incubator

By Hunter Bishop
Tribune-Herald

Sometime within the next 15 days, scientists should have a better idea what kind of turtle laid the eggs at Hilo Bay in October.

George Balazs, head of the federal Marine Turtle Research Program in Honolulu, said he only surmises the turtle eggs are of the endangered olive ridley species.

Fishermen saw the lone turtle crawl onto the beach and deposit its eggs in the sand close to the water line at Bayfront on the moonless night of Oct. 7.

That alone is unusual. Whether it's a rare olive ridley or not, Balazs said it's the first time in at least 30 years that any kind of turtle has nested on the Hilo Bay beach.

But October is the wrong time of year for sea turtles common to Hawaii — the green and hawksbill turtles — to be nesting.

One of the fishermen also reported that he picked up the turtle and carried it to the water after it laid its eggs and started walking toward Kamehameha Avenue. The fisherman estimated the turtle's weight at about 70 pounds.

Balazs thought then that it could not have been a turtle that normally inhabits Hawaiian waters. Mature green and hawksbill turtles weigh more than twice that much, he said.

Photographs and measurements of the eggs also didn't match up to the Hawaii species. And local turtles usually return to the same site to lay more than one clutch of eggs, he said.

So local researchers and students from the Marine Options Program at the University of Hawaii at Hilo monitored the site. The turtle never returned.

"A strange time, strange place and strange circumstances," Balazs said. By the process of elimination, he decided, "it could be an olive ridley." But he's still not sure.

In 1984 an olive ridley nested on Maui, Balazs said, and it too laid its eggs too close to the water line where they would surely not develop, providing Balazs with one more clue.

State Conservation Officer Andy Ford and several students reburied the eggs higher up on the beach in Hilo soon after they were left by the turtle. Concrete barriers and flagging tape were put around the new nesting site to protect it. But when Balazs checked a few of the 124 eggs Dec. 5, the embryos seemed to be developing too slowly.

Egg experts advised him that temperatures in Hilo have been too cold lately for the proper

See TURTLE, Page 12

12-13-02 HAWAII TRIBUNE HERALD

Photo by Reuven Walder

This photo shows an olive ridley sea turtle, like the kind researchers surmise crawled onto the beach at Hilo Bay and deposited its eggs in the sand along Bayfront the night of Oct. 7.

Tribune-Herald photo

The Bayfront location where the turtle buried its clutch of eggs.

TURTLE: Time will tell if it was an olive ridley

From Page 1

development of the eggs. Olive ridley turtles normally nest in the warmer coastal climes of Mexico or Costa Rica. "It's one of the most tropical sea turtles," Balazs said. While an olive ridley turtle has been seen as far north as San Francisco, there is no explanation why a certain few range so far.

"We needed to warm the eggs up if we were going to get any of them hatched," he said. A week ago the eggs were dug up and carefully transported to UH-Hilo where under the supervision of professors Walter Dudley, Leon Hallacher and Bill Mautz, students are incubating the eggs and monitoring their development. "They are like doting mothers," Balazs said.

If one of the eggs hatches, researchers will know immediately what kind of turtle it is. If the incubation effort fails, a DNA sample will tell the tale. Balazs is still hedging his bets. "It could be an incredibly small green turtle, maybe a hybrid," he said.

"We are doing everything we can to get some babies out of that clutch. (Yet) you don't want to be too invasive."

So it's wait and see for another 10 to 15 days.

Balazs described the effort to hatch the eggs as "heroic ... . A lot of people of people are doing the best we can."

If some eggs do hatch, the little turtles will probably be taken up to 10 miles offshore within one or two days while they still have their instinctive desire to swim, Balazs said. "That would make the best science sense."

If there are enough to spare, Balazs also may propose to keep some to raise in captivity for further research and display to the public. After all, he said, "without human intervention, these eggs would have been for naught."

Hunter Bishop can be reached at hunter@hawaiitribune-herald.com.

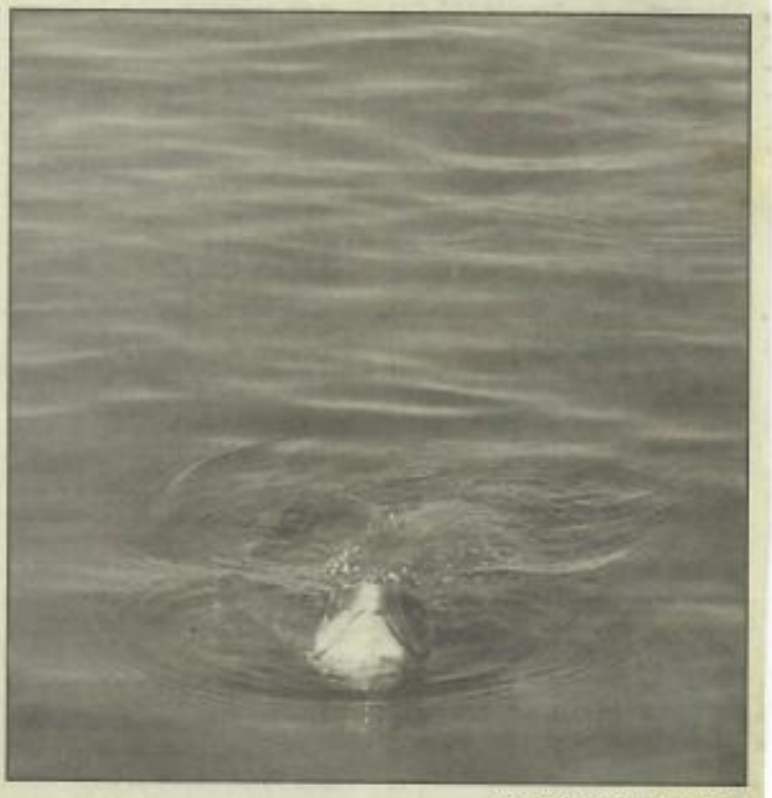


Photo by Reuven Walder

An olive ridley sea turtle is generally smaller than hawksbill and green sea turtles common in the Hawaiian Islands.

Letters

Credibility, balance needed

Maui News writer Laurel Murphy's zeal to promote a New Age agenda is getting in the way of good reporting. Several weeks ago she gave a full-page promotion of Kirlian photography of "auras" to assess the health and diagnose nutritional deficiencies. But the gimmickry doesn't photograph the mythical aura, and it is worthless for medical and nutritional diagnoses. The $160 charge for the services (and still more for supplements and herbs?) is wasted.

Her article on Elaine Willis (Jan. 22) has several egregious errors of fact and some silly advice. For example, contrary to Murphy's claim, Irwin Stone had nothing to do with the discovery of vitamin C. "Dr." Stone holds an honorary degree in chiropractic and a "Ph.D" from Donsbach University, a notorious diploma mill. This school's founder is a convicted quack whose hospital of horrors in Mexico was recently exposed on Inside Edition. Encyclopedias and basic texts, surely available to Maui News writers, have information on the discovery of vitamin C.

Also, the advice to drink eight glasses of pure water a day is ridiculous. One's daily water requirement depends on activity level, climate, fluid intake from other sources, and many other factors. No hard rule can apply. However, a reasonable rule of thumb is to drink enough to keep your urine dilute, that is, very light yellow.

Instead of blindly parroting the fringe, Murphy should consult skeptical experts to give her stories some balance and credibility.

Kurt Butler
Haiku

Turtle diners were lucky

A mere slap-on-the-wrist compared to what Mother Nature could have imposed as punishment. That's how one might view the two-day jail sentence recently handed down in Wailuku District Court to four homeless men caught cooking a sea turtle.

The pitiful turtle they were foolish enough to cut up and eat was riddled with disease. Ulcerated tumors protruded from its eyes, neck and shoulders. In addition, photos taken at the time indicate the animal was severely emaciated. This condition in sea turtles is often accompanied by infections of internal parasites, along with potentially nasty microorganisms.

No sick animal taken from the wild should ever be eaten. This applies to ones freshly killed, as well as those already dead for an unknown time, as the men in this case claimed in court. Furthermore, the health of a wild animal can't always be accurately judged by just looking at it. The possibility of severe illness from eating diseased wildlife is simply not worth the risk, even if the law isn't broken.

Just a few months ago a man was sentenced in federal court to a month in prison for intentionally killing a large turtle on the Big Island. Turtles were abusively overexploited in Hawaii for decades prior to becoming fully protected in the late 1970s. The average turtle takes about 25 years to become sexually mature. At certain locations in Hawaii there are now some encouraging signs of population recovery. Most everyone would like to see this trend continue to ensure the long-term survival of these magnificent creatures. Turtles contribute to the overall diversity and enrichment of the Hawaiian marine environment. Also, like humpback whales, they are fun to watch.

George H. Balazs
Honolulu

The Maui News policy on letters

The Maui News welcomes and encourages letters to the editor. The letters should be brief and to the point and on subjects of general interest. Letters must be signed and include an address and phone number where the writer can be reached during working hours for verification. The writer's name and community will be published.

Letters should be limited to 250 words or less with shorter letters being given priority. Letters of any length are subject to editing. Typed letters are preferred but others will be accepted if they are legible.

Letters may be mailed to The Maui News, 100 Mahalani St., Wailuku 96793; or may be faxed to 242-9087.

Welfare system doesn't work

I am writing in regards to the welfare division of the Department of Human Services. I am very disappointed as for their policies on their budgets set for low incomes here in Hawaii. How ignorant can a government be in deciding Hawaii's income qualifications for our residents here?

I am 28 years old, and am pregnant with my first child, and this is the first and only time in my life that I or my fiance, who is 27, have ever asked for any type of help from our state.

All these years we've worked and paid our taxes, knowing that some of our hard-earned money in the past 14 years has gone to the IRS and state welfare offices of Hawaii to pay for other people. There are people who misuse the system and live off the welfare most of their adult lives.

I have worked since I was 14 years old, full-time after school, and during these years this is the first time I have been unable to work. Because of being diabetic it made my pregnancy harder for me, so I had to be pulled off of work earlier from being a waitress.

So who are they to turn us away?

We were turned away because we make too much money. Is $950 per month too much money to take home for a young couple with an expected baby? Our rent is $750 with utilities and the other $200 we have to stretch for gas from Kihei to Kahului to work, food, phone and other needs. Sorry, but $200 doesn't stretch for all that. The welfare office goes by your gross income, not your net. Unless you're grossing $800 or less, you won't qualify. Well, we didn't qualify. We make too much money.

West Hawaii Today
3-6-94 (SUNDAY)
page 1D

Science & Nature

Students ask care for green turtle habitat at Kiholo Bay

Students and teachers at Hawaii Preparatory Academy, working jointly with researchers from the National Marine Fisheries Service (NMFS), are asking the public's help in protecting green turtles and their marine habitats at Waiananalii Pond and the surrounding waters of Kiholo Bay in North Kona.

NMFS and Hawaii Prep are working together in a research effort to place sonic tags on the turtles at Kiholo Bay to study their daily movements. The small electronic tags, attached in a safe manner to the edge of the turtles' shells, give off a coded sequence of high frequency "beeps" which identify each turtle.

The frequency travels very well in seawater, so the turtles can be heard quite easily with a special hydrophone. The specific code of each sonic tag allows students to follow the turtles unobtrusively for extended periods of time and determine their movements and behavior.

This information is important, says NMFS Zoologist George Balazs, who oversees the project. Federal and state enforcement agencies make use of the data to improve management strategies for green turtles, a species protected under the U.S. Endangered Species Act.

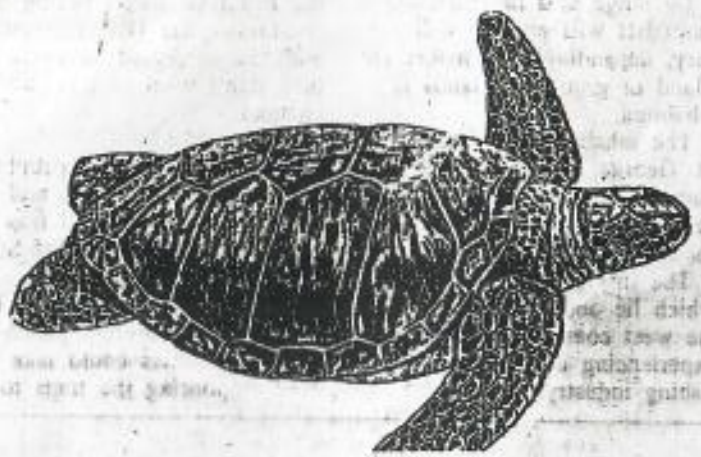
The sonic tagging research to date indicates that green sea turtles are creatures of habit. They seem to follow a relatively consistent daily behavior pattern within a fairly small area or "home range," where they graze on algae (limu) growing in the shallows.

"We now know that Kiholo Bay and the associated Waianananalii Pond are crucial habitats for green turtles, with a relatively large population of juveniles relying on this area for their food, rest, and safety," Balazs said. None of the turtles seen so far at Kiholo are more than about 15 years old. Green turtles take an average of 25 years to reach sexual maturity.

Balazs pointed out that Kiholo Bay and Wainanalii Pond are also used by some people for recreation and fishing. Motorters sometimes disturb the habitat when they motor into the pond, but the most severe problem for turtles comes from the monofilament gill nets stretched across the pond's inlet and other areas of the bay.

These invisible webs can entangle, strangle, and drown turtles as they move back and forth between their foraging and sleeping areas. Several dead turtles believed to have suffered from forced submergence in gill nets have been found along the shoreline.

Visitors should enjoy watching the graceful and gentle ocean animals, but should not harm or harass them. If people are seen doing otherwise, they should be reported to the State's marine and wildlife enforcement offices in Kona at 329-3434 or 323-3141.



—Courtesy G.H. Balazs

CHELONIA MYDAS — Students from Hawaii Preparatory Academy are asking for the public's assistance in protecting green turtle habitats at Kiholo in North Kona.

Punishment was painless

As a 60-year resident of Hawaii and a long-time member of The Nature Conservancy of Hawaii, I am outraged at the so-called punishment the four men received for cooking a green sea turtle at Hale Nanea in Kahului.

What they really got as punishment was a neat deal. They got a clean safe place to sleep, good hot food to eat, a shower and clean clothes for two days. That's all! They claimed the turtle was already dead. Oh, sure!

I can imagine that the enforcement officers of the Department of Land and Natural Resources are just as outraged as I am.

Bear in mind, a hot meal is served at Hale Nanea to the homeless almost daily. They also could have walked to the Kahului Salvation Army for a free lunch, shower and laundry. Free lunches are served almost daily there. They didn't have to cook the turtle for food.

So, has a precedent been established? From now on, if someone is found with a dead green sea turtle, all they have to say is they found it dead and they're homeless. Nothing will be done in the way of real punishment.

I am disgusted with this whole incident.

Clare Merrill
Kahului

Maui News
1/20/94

More than jail to fear from eating turtles

THE GARDEN ISLAND (KAUAI) 3/9/94 A4

To The Forum:

A mere slap-on-the-wrist, compared to what Mother Nature could have imposed as punishment. That's how one might view the two-day jail sentence recently handed down in Wailuku District Court on Maui to four homeless men from the mainland caught cooking a sea turtle.

The pitiful turtle they were foolish enough to cut up and eat was riddled with disease. Ulcerated tumors protruded from its eyes, neck, and shoulders. In addition, photos taken at the time indicate the animal was severely emaciated. This condition in sea turtles is often accompanied by infections of internal parasites, along with potentially nasty microorganisms.

No sick animal taken from the wild should ever be eaten. This applies to ones freshly killed, as well as those already dead for an unknown time, as the men in this case claimed in court. The possibility of severe illness from eating diseased wildlife is simply not worth the risk, even if the law isn't broken. Ironically, wholesome and hot meals are served free each day within walking distance of where the men were arrested with the turtle.

Just a few months ago a man was sentenced in federal court to a month in prison for intentionally killing a large turtle on the Big Island. Turtles were abusively overexploited in Hawai'i for decades prior to becoming fully protected in the late 1970's. The average turtle takes about 25 years to become sexually mature (200 – 300 lbs). At certain locations in Hawai'i there are now some encouraging signs of population recovery. Most everyone would like to see this trend continue to ensure the longterm survival of these magnificent creatures. Turtles contribute to the overall diversity and enrichment of the Hawaiian marine environment. Also, like humpback whales, they are fun to watch. They are playing an increasing part of the ecotourism experience that results in an economic benefit to Hawai'i.

The rebuilding of a robust turtle population—one that will not easily fall into decline once again—is dependent upon keeping human-related mortality to a minimum. State and federal conservation enforcement officers should be supported, and praised for their fine efforts.

George H. Balazs
Honolulu

Month in prison for turtle killing

A federal magistrate yesterday sentenced a Big Island man to a month in prison for capturing and later killing a green sea turtle, which is protected under the Endangered Species Act.

Anthony Barro, 35, of Naalehu had pleaded guilty to pulling the turtle from water near the Big Island's Punaluu Beach Park in March 1992.

A witness reported that Barro and a co-defendant, Clyde Agres Jr., carried the turtle to a pavilion at the park. Another co-defendant, John Quintal, admitting taking it away from the park in a pickup truck.

Although the turtle was never found, Barro admitted in court that he later killed it.

West Hawaii Today

George –
Looks like they
printed the whole letter –
Mare

Letters

Turtle talk

Editor:

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George H. Balazs
Honolulu

men's Foundation and Hawaiian International Billfish Association have endorsed the Network's National Agenda. We must recognize the need to preserve our fishery resource. Fix the policy at home first, then focus on other nations.

Only with your help will the network become real effective. Write or call our congressional leaders. Let them know that you support proposals to conserve fish for future use. It is especially important that our representatives and senators hear from you early this session.

Art McCornack
Mountain View

Not a right

Editor:

Those who protest their rights are being infringed upon by gun control need to be reminded that the "right to bear arms" was preceded by other "inalienable rights" — namely "life, liberty and the pursuit of happiness." There is no liberty when you cower in your home behind triple locked doors and there is no happiness in eyes blinded by tears for the loss of innocents.

It is by the gun that the American Indian lost his birthright, animals were hunted to the edge of extinction, and the Hawaiian became an alien in his own land. It is the gun that enables a person to take what is not his, to enforce his opinions upon others and to destroy those who thwart him.

It is time for Mr. Stanfield and others to accept that might is not always a right.

Claudia Keanaaina
Kailua-Kona

Golf mahalo

Editor:

The Hawaii School Offices Services Association (HSOSA) — Hawaii Chapter held a golf tournament on Jan. 8 at the Makalei Country Club. Sixty-two dedicated golfers participated and made it a success.

The monies raised at this fundraiser will enable our chapter to sponsor the 37th annual State HSOSA Convention on March 24 and 25 at the Kona Surf Resort and Country Club. Delegates from each island will be attending this convention, the first one in 14 years to be held in Kona.

Each golfer received a door prize, thanks to the numerous donations received from the community, businesses and members

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A witness reported that Barro and a co-defendant, Clyde Agres Jr., carried the turtle to a pavilion at the park. Another co-defendant, John Quintal, admitting taking it away from the park in a pickup truck.

Although the turtle was never found, Barro admitted in court that he later killed it.

Letters

Stop slaughter

Editor:

On April 24, the recently butchered remains of two small sea turtles were found at Kiholo Bay. Another slaughtered turtle was reported there just three months ago.

If anyone has information that can help apprehend the person(s) responsible for these crimes, please call State Conservation Officers at 323-3141 (Kona), 933-4291 (Hilo), or Federal Agents in Honolulu at 541-2727.

Something urgently needs to be done to stop these acts of violence against Hawaii's wildlife.

George H. Balazs
Honolulu

Hawaii Tribune - Herald, Monday, May 9, 1994—9

Letters

Turtles slaughtered

On Sunday, April 24, the recently butchered remains of two small sea turtles were found at Kiholo Bay in North Kona. Another slaughtered turtle was reported at this same location just three months ago. If you have any information that can help apprehend the person(s) responsible for these crimes, please call state conservation officers at 933-4291 (Hilo), 323-3141 (Kona), or Federal agents in Honolulu at 541-2727.

George H. Balazs
Honolulu

Award rewards commitment to turtles, zoo

THE MAUI NEWS — Thursday, May 19, 1994 –

WASHINGTON — A former sea turtle fisherman turned botanist was honored here Wednesday for his contribution to saving the endangered sea turtle and creating the Maui Zoological and Botanical Gardens.

Rene Sylva of Paia is one of 15 winners from across the United States selected to receive the 40th annual Chevron-Times Mirror Magazines Conservation Award recognizing natural resource conservation efforts.

Rene Sylva received the Chevron-Times Mirror Magazines Convervation Award.

The awards are given in three categories: citizen volunteers, professionals and nonprofit organizations. Sylva was honored at a banquet and received $2,000 and a bronze plaque acknowledging his achievements in the professional division.

A Native Hawaiian commercial sea turtle fisherman, Sylva abandoned his livelihood because of the decline he saw in the turtle population, according to a news release. He destroyed his nets, gave away all his turtle shells and was the only fisherman to testify for a ban on continued turtle fishing. Sylva and others lobbied successfully to include Hawaii's sea turtles on the Endangered Species List.

After quitting his fishing career, Sylva became a groundskeeper at the zoo when it opened in 1976 and persuaded his boss the zoo should have a botanical garden, the news release says. Using his own resources, he took it upon himself to collect, grow and care for more than 200 native Hawaiian species to create the Maui Zoological and Botanical Gardens.

"Rene Sylva represents the very best example of commitment to the principles upon which the awards program was built and we, at Chevron, are very pleased and proud to recognize his achievements," said James Sullivan, vice chairman of the Chevron Corp.

The conservation awards program was created by the late Ed Zern, a nationally recognized sportsman, humorist, author and former columnist for Field & Stream, a Times Mirror magazine.

Turtle tumors troubling

The recent photo and short article (Sept. 5) about a dead green turtle with tumors washing ashore at Kaanapali once again emphasizes the problems still confronting this special ocean animal in Hawaii.

The issues of fibropapilloma tumor disease, accidental entanglement and death in gill nets, and illegal hunting and harassment continue to plague this species. Researchers and conservation officials here and across the nation are working hard to deal with these and other problems confronting sea turtles.

Protection under the U.S. Endangered Species Act over the past 17 years has resulted in some positive signs of sea turtle recovery in Hawaii.

But the process needs to continue unimpeded by abnormal levels of disease and other types of mortality and stress. The average green turtle in Hawaiian waters requires more than two decades to grow to maturity and become large enough to migrate many hundreds of miles to reproduce (at French Frigate Shoals).

Sea turtles found dead, dying from disease, or injured from spear wounds or boat collisions are frequently flown to Honolulu for treatment or autopsy by veterinary specialists. Personnel of the State of Hawaii's Division of Aquatic Resources and the Division of Conservation and Resource Enforcement on Maui regularly respond to reports of turtles in trouble. Their outstanding efforts are worthy of praise by the community. The public should support their work wherever possible.

George H. Balazs
Marine Turtle Research
NOAA/NMFS Honolulu Laboratory

Maui News (Letters) 09-13-95

- 9/19/95 A11

Honolulu STAR-Bulletin

If you spot a sea turtle feasting, call now . .

An interesting story Sept. 9 by Star-Bulletin reporter Greg Ambrose reported on the painful sting beach-goers can suffer from a new and larger type of Portuguese man-of-war now drifting into Hawaiian waters. It is worthwhile to add that many sea turtles worldwide are prominent predators of jellyfish, which they consume opportunistically without apparent discomfort or harm.

Records exist of our Hawaiian sea turtles sporadically feeding on the normal, smaller form of man-of-war. Our research program of sea turtles within the Protected Species Investigation of the National Marine Fisheries Service would like to hear from anyone seeing a turtle eating the new species now invading Hawaiian waters.

Besides having much larger floats (up to 6 inches long), the new jellyfish is cobalt blue and armed with thicker, longer and more numerous stinging tentacles. Please telephone your report to 943-1276. A recorder will take your message whenever personnel are unable to answer the phone.

GEORGE H. BALAZS
Marine Turtle Research
NOAA/NMFS Honolulu Laboratory

Cases are heard in Kaua'

By GEORGIA MOSSMAN
Staff Writer

The following cases were resolved in District Courts around the island during the months of November and December by Judges Cliff Nakea and Gerald Matsunaga and Per Diem Judges Joseph Kobayashi and Frank Rothschild.

Information on the results of the court hearings is not available until all the records are completed so the defendant's appearance in court was several months prior to this report, and the actual incident may have happened months before the court appearance.

Most cases involve misdemeanor offenses. Some of the original charges have been reduced through plea bargaining. Theft in the 4th degree usually refers to shoplifting.

When a deferred acceptance of a guilty (DAG) plea is granted, to first-time offenders only, if the person remains arrest-free for a specified length of time, the charge will be erased from his or her criminal record.

Charges dismissed without prejudice could be reinstated later. In cases where there are felony charges, the mater could be taken up later by the grand jury.

Darryl Ineri and Nicholas Quereto of Kapa'a were charged with taking two green sea turtles at Ahukini, in violation of the endangered species act. Through plea bargaining, Ineri agreed to plead guilty to one count if the charges against Quereto were dismissed, then he was fined $500.

On an assault charge, David Metzger, 30, of Kilauea was placed on probation for one year. He was also given a 6-month jail sentence with four months suspended; he must donate 100 hours to community service; he must make $676 restitution for damages; and he must stay away from the victim.

On an harassment charge, Avelardo Cacabelos, Jr., 23, of Puhi, was placed on probation for six months, given a 30-day jail sentence which was suspended; and he must successfuly complete an Alternatives to Violence course.

Charlson Manoi, 22, Lihu'e, charged with criminal property damage (CPD) 4th degree and disorderly conduct, was given 15 weekends in jail.

Jaime Villon, 21, of Hanama'ulu, charged with trespassing and theft 3rd degree, was placed on probation for one year; given a 30-day jail sentence with 25 days suspended; he must donate 75 hours to community service; and he must have a substance abuse evaluation.

On an harassment charge, Gerry Riopta, 27, of Lihu'e was granted a DAG plea and fined $150.

Charged with criminal property damage 3rd degree, Stephen Sandoval, 27, of 'Ele'ele was given a one-year jail sentence, which was suspended except for 24 days and he has to make restitution for the damages.

For trespassing, Nathan Nobriga, 33, of Koloa was fined $150.

Charged with harassment, Albert Bactad, 18, of Lihu'e was granted a DAG plea; fined $250; and he must attend an Alternatives to Violence (ATV) course.

A trespassing charge netted Melvin Robley, 20, of Puhi a fine of $50.

Charged with bail jumping and theft 4th degree, Nickolas Nickos, 33, was given a 40-day jail sentence.

An harassment charge netted Carolyn Moniz, 20, of Hanapepe, a $50 fine.

For a use permit violation, Joseph Moura of Kapa'a was fined $150.

When Russell Reynolds of Lawa'i showed the judge proof of new insurance, he was fined $500 for having driven without insurance.

On an harassment charge, Editha Perez, 44, of Kapa'a was fined $50.

For writing a bad check, Sharolyn Cardenas, 33, of Kapa'a was fined $300.

For CPD 4th degree, Jonathan Pila, 24, of Wailua was fined $150.

Wesley Kawagishi, 40, of Anahola, charged with possession of a small amount of marijuana was granted a DAG plea; fined $200; and he has to have a substance abuse evaluation.

For theft 3rd degree, Ann Bowers, 24, of Kapa'a was granted a DAG plea and she must donate 50 hours to community service.

Michael L. Scott, 32, of Princeville, charged with CPD 3rd and terroristic threatening, was placed on probation for one year; he must donate 140 hours to community service; pay $455 restitution for damages; have a substance abuse evaluation; and stay away from the victim for a year.

For disorderly conduct, Simon Jude Texeira, 34, of Kealia was fined $100 and given a 10-day jail sentence, which was suspended.

For gambling, Patrick Nakaula, 19, of Kapa'a was fined $50.

On an harassment charge, Joseph Hosino, 44, of Kilauea was given a 30-day jail sentence.

On two counts of harassment, Lloyd Palmeira, 22, of Kapa'a was placed on probation for six months; given five weekends in jail; fined $250; he must make $1,320 restitution; and he must successfully complete an ATV course.

For criminal property damage 4th degree, Raymond Rapozo, Jr., 35, of Kapa'a was fined $200; he must make $300 restitution; and he must continue treatment.

Soren Stiehl, 27, of Anahola was given a seven weekend jail sentence on an harassment charge.

For assault, disorderly conduct and trespassing, Thomas P. McCarthy, 39, of Kapa'a was sent to jail

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4 arrested in turtle deaths

HILO (AP) — Two men have been charged with killing a threatened species for the slaughter of two protected Pacific green sea turtles at Wailea Bay.

Two teen-age boys were also arrested in connection with the April 9 slaughter. The boys were released to their parents.

Liebert Ignacio, 20, of Hawaiian Paradise Park, and Eddie Poai, 19, of Hilo, were charged after they were arrested Wednesday night by state enforcement officers, said Lenny Terlep, chief of the Big Island conservation enforcement office.

The men could also face federal charges, because the green sea turtle is a threatened species. An anonymous telephone call led the officers to the suspects and the recovery of two turtle shells and turtle meat, Terlep said.

The four had been camping in the area when the heads and flippers of the butchered turtles, believed to have weighed 40 to 50 pounds apiece, were discovered by a fellow camper, he said.

WEST HAWAII TODAY 4/16/95

Boat overturns during green sea turtle rescue

Advertiser 3/28/95

KAHANA, Maui – A small rowboat overturned yesterday morning as Maui fishermen tried to rescue a green sea turtle caught in their gill net.

State conservation enforcement chief Keith Keau said the 7 a.m. incident occurred about 100 yards off Kahana, where the men had laid a net.

When the turtle became caught in the net, two of the men went out in a small boat and tried to haul the turtle and net into the boat, Keau said. The boat capsized.

A Maui fire/rescue team went out to assist the fishermen, the net was cut in half, and the turtle finally was dragged ashore to be untangled, he said.

The turtle was estimated to weigh between 200 and 300 pounds. It was uninjured although it was suffering from tumors on its right flippers.

"It's probably halfway back to French Frigate Shoals by now," Keau said.

Tangled green sea turtle gets helping hand

KAHANA — Maui firefighters helped free a green sea turtle tangled in a gill net Monday morning in waters off Kahana.

Two fishermen reported they were picking up their fishing net left overnight when their dinghy swamped and they discovered a large turtle was caught in the net.

Fire Capt. Alan Pascua said by the time Lahaina firefighters responded to the 6:50 a.m. call for help, the fishermen were on shore trying to rescue the turtle. They helped cut the net in half in the water and then dragged the turtle ashore.

The turtle, which weighed an estimated 200 to 300 pounds, was calm and allowed its rescuers to untangle the net before it was set free again.

Maui News 3/28/95

Wednesday, February 4, 1998
The Honolulu Advertiser
HAWAII

Scientists closing in on turtle tumor virus

By Jan TenBruggencate
Advertiser Science Writer

Hawaii researchers are close to identifying the cause of a severe tumor disease that affects green sea turtles in Hawaii and around the world.

Half the turtles in Kaneohe Bay and 80 percent of those found stranded at Kahului, Maui have the tumors, which often are fatal.

"We now know that the cause of the tumors is a virus," but not specifically which virus or group of viruses is at fault, said Yuanan Lu, a virologist at the Retrovirology Research Laboratory of the University of Hawaii's Pacific Biomedical Research Center.

What's also not yet clear is why the viruses started causing turtle tumors in the middle of this century and why the disease is limited to certain regions, said George Balazs, leader of marine turtle research at the National Marine Fisheries Service's Honolulu Laboratory.

Researchers during the last

See Turtles, Page B5

Turtles: Scientists close in on tumor virus

FROM PAGE B1

few years have identified two major kinds of viruses in the turtle tumors: one is a herpes-type virus and the second is a retrovirus, like the kind that causes HIV in humans.

Lu recently established that a third type of virus is found in nearly all the turtle tumors: a papilloma virus.

"Papilloma is in a family of viruses that has been known to cause tumors in animals," Lu said. One of them is associated with cervical cancer.

It's possible one of the viruses is causing the tumors in turtles, or that two or more of the viruses working together cause the disease, Lu said.

Balazs said a Florida researcher is studying another possibility: that the turtles are eating something that makes them susceptible to viruses that otherwise would be harmless to them.

The tumor disease, called fibropapillomatosis or FP, affects as many as half the turtles in Kaneohe Bay and south Molokai, as many as a third of those on the south side of Kauai and Hilo, but oddly, none has been found among turtles on the Kona coast.

Balazs said a researcher with the Florida Department of Environmental Protection has studied tiny marine creatures called dinoflagellates, which are found among some of the seaweed beds where turtles feed. One of the dinoflagellates produces a compound called okadaic acid, which could be affecting turtles.

Research indicates the okadaic acid producer is found in the highest concentrations in the same areas where turtles with the most tumors are found.

"It could be an environmental co-factor in which the animals can get along perfectly fine" if it is not present, but become susceptible to viral attack if it is, Balazs said.

Federal, state and private researchers, universities and other organizations across the country are working on the turtle tumor problem. But, even if they identify the specific cause, it is not clear that there will be an immediate solution.

Viral diseases are very difficult to control, Balazs said, even when large amounts of money are available. In the case of turtles, funding is chronically short.

Hawaii's green sea turtles are considered an isolated genetic group that does not interbreed with green sea turtle populations elsewhere. They have been under the protection of the federal Endangered Species Act since early 1970 and, since that time, their numbers have increased substantially.

In many turtles, the tumors are ultimately fatal, blocking their airways or preventing them from feeding. Tumors on their faces can blind them and ones around their flippers can interfere with their swimming.

Star-Bulletin

WORLDWIDE PLIGHT

Tumors threaten green sea turtles

A hospital for turtles is racing to save as many of the creatures as possible

BY DAVID ROYSE
Associated Press

MARATHON, Fla. — A fishing boat captain spots a giant sea turtle in shallow water near a stand of mangroves just off the coast. He's seen turtles here before, only this time there's something horribly wrong.

The green turtle is covered with a gruesome growth of gray, bulbous tissue. The mass – half the size of the turtle itself – is slowly starving the animal by covering the eyes it uses to find food.

The growths, noncancerous tumors called fibropapillomas, have turned up in alarming numbers on sea turtles all over the world, and researchers are scrambling to find a cure while there are still turtles left to save.

"The disease is taking the turtles faster than Mother Nature can replace them," said Richie Moretti, who runs the Turtle Hospital in the Florida Keys. "It's definitely a race."

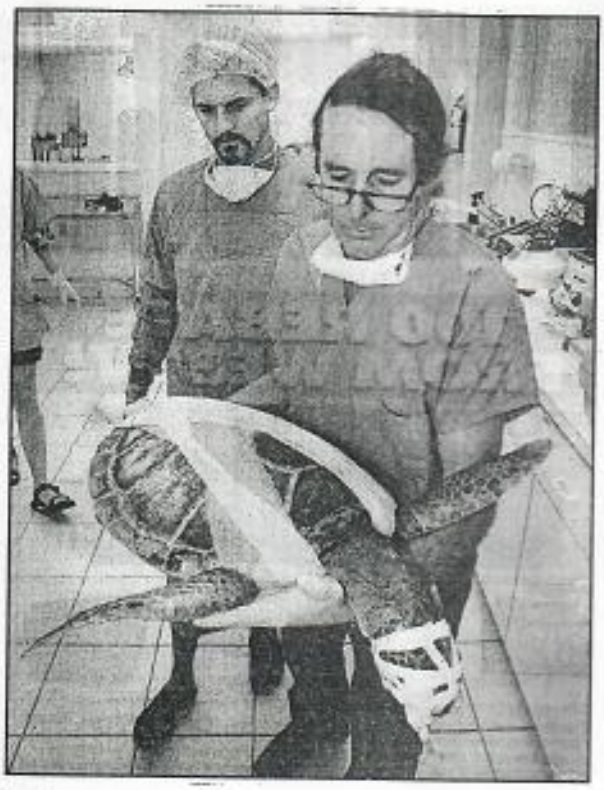
The tumors themselves don't kill as much as they smother. Eyes and noses get covered. Lungs and the heart are constricted by the tumors on the inside. The turtle found by the boat captain was not only blinded, but the mass also covered its rectum, preventing it from eliminating waste.

Nicknamed Mini Pearl, after the fishing boat that saved it, the turtle underwent surgery at the hospital to remove the tumor and was recovering in a swimming pool. The giant, flaking mass was sent to a lab for study.

Researchers believe something is causing turtles' immune systems to weaken.

The prevalence of tumors in turtles found near shore areas suggests a possible link to runoff from fertilizer or farm waste. Some turtle habitats have an infection rate as high as 90 percent.

"Runoff is definitely a possibility because you see turtles with papillomas mostly in heavily populated areas," said Glenn Harman, a marine biologist at the Clearwater Marine Aquarium.



> *The disease is taking the turtles faster than Mother Nature can replace them. It's definitely a race.*
>
> **Richie Moretti**
> Founder of the Turtle Hospital in the Florida Keys

Above, an anesthesia cone is placed on Lumpy III, a green sea turtle with fibropapilloma tumors on its face. At left, Richie Moretti holds Lumpy III after surgery, as veterinarian Doug Mader looks on.

Associated Press photos

Scientists also have speculated that cyclical changes in water temperature may be decreasing the cold-blooded animals' ability to ward off viral intruders.

"There's some worldwide problem going on and how to tie it all together is not easy," said University of Florida veterinarian Elliott Jacobson, who has done research on the tumors.

Jacobson doesn't know how many green sea turtles have been affected, or how many of the endangered turtles remain.

Turtles with tumors have been seen from Brazil to the coast of Florida, from Hawaii to Australia, and in Indonesia. Green sea turtles aren't the only ones turning up with the tumors; they have also been seen on loggerheads and olive ridley turtles.

A study last year by the Florida Department of Environmental Protection found that 10 percent of live loggerhead turtles caught in Florida Bay, at the southern tip of the state, are affected.

For Moretti, who has worked the last 10 years to heal injured and sick turtles, the tumor is the worst enemy yet.

"We're losing them to something we can't see," he said.

Mini Pearl is about 6 years old and 24 pounds with the tumor. The disease primarily afflicts young turtles, ages 5 to 10, and few turtles with the tumors survive, unless the growths are removed.

At the Turtle Hospital, built on the site of a former strip joint that is veterinarian Doug Mader's specialty. These days, much of his time is spent removing the fibropapillomas, although the hospital also has repaired turtle hernias, removed fishing line from turtle digestive tracts and plans to perform soon what is thought to be the first ever turtle cornea transplant.

The operation on Mini, which required the reconstruction of the turtle's rectum, was a success. If the turtle stays healthy, it should grow to more than 500 pounds and live to be about 100.

"A few animals may be releasable, and many tumors may grow back," Jacobson said. "But there's a lot that's learned from doing it, and there's some education of people about this, so this is

SCIENCE
Advances in knowledge

Mouth tumors found only in Hawaii turtles

Star-Bulletin staff

Tumors of the mouth are plaguing many turtles in Hawaii but scientists are not sure why.

Hawaii researchers examined 222 tumored turtles found dead or dying between 1991 and 1995. Of those, 61 percent had tumors inside their mouths. Many of these oral tumors clearly hampered normal breathing and feeding in the turtles, likely contributing to their deaths. In another study, researchers captured, examined and released 236 living turtles with tumors in Kaneohe Bay. Of these, 40 percent had mouth tumors.

In contrast, researchers have found no tumors in the mouths of affected Florida turtles, either living or dead.

No one knows why such a notable difference exists between the two populations. One guess is that perhaps marine parasites found in Hawaii but not Florida make tiny sores in the mouths of our turtles, setting them up for infection.

Send comments and tips through e-mail to:
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Florida Metro fax, (813) 259-7678

FOCUS ON FLORIDA

Tumors threaten green sea turtles

By DAVID ROYSE
of The Associated Press

MARATHON – A fishing boat captain spots a giant sea turtle in shallow water near a stand of mangroves just off the coast. He has seen turtles there before, only this time there is something horribly wrong.

The green turtle, as big as the roof of a compact car, is covered with a gruesome growth of gray, bulbous tissue. The mass — half the size of the turtle itself — is slowly starving the animal by covering the eyes it uses to find food.

The growths, noncancerous tumors called fibropapillomas, have turned up in alarming numbers on sea turtles all over the world, and researchers are scrambling to find a cure while there are still turtles left to save.

"The disease is taking the turtles faster than Mother Nature can replace them," said Richie Moretti, who runs the Turtle Hospital in the Florida Keys. "It's definitely a race."

The tumors themselves don't kill as much as they smother. Eyes and noses get covered. Lungs and the heart are constricted by the tumors on the inside. The turtle found by the boat captain was not only blinded, but the mass also covered its rectum, preventing it from eliminating waste.

Nicknamed Mini Pearl, after the fishing boat that saved it, the turtle underwent surgery at the hospital to remove the tumor and was recovering in a swimming pool. The giant, flaking mass was sent to a lab for study.

Researchers believe something is causing turtles' immune systems to weaken. What that is, they don't know.

But the prevalence of tumors in turtles found near shore areas suggests a possible link to runoff from fertilizer or farm waste. Some turtle habitats have an infection rate as high as 90 percent.

"Runoff is definitely a possibility because you see turtles with papillomas mostly in heavily populated areas," said Glenn Harman, a marine biologist at the Clearwater Marine Aquarium. "But really, we just don't know. I wish I did."

Scientists also have speculated that cyclical changes in water temperature may be decreasing the cold-blooded animals' ability to ward off viral intruders.

"There's some worldwide problem going on and how to tie it all together is not easy," said University of Florida veterinarian Elliott Jacobson, who has done research on the tumors.

Hawaii Tribune-Herald

NO. 260 HILO, HAWAII, SUNDAY, NOVEMBER 2, 1997

Turtles likely killed for food

❑ Six carcasses are found in Keaukaha; poachers suspected

By Hunter Bishop
Tribune-Herald

Six green sea turtles whose carcasses were found discarded off the side of Kamokuna Street Friday were probably killed by poachers for their meat, state conservation officials said.

An unidentified informant notified the state Department of Land and Natural Resources of the find on Friday. The carcasses were dumped in a makeshift landfill in a wooded area near the Hilo Yacht Club in Keaukaha.

State Conservation Enforcement Officer John Kahiapo said it appeared three of the turtles had been slaughtered within the past 36

T-H photo by Hunter Bishop

State Conservation Enforcement Officer John Kahiapo measures one of six green sea turtle carcasses found Friday in Hilo.

See TURTLES, Page 8

TURTLES: Six carcasses are found in Keaukaha

From Page 1

to 48 hours because flesh was still attached to the shells. The others had dry shells that had apparently been dumped at the site some time ago.

One of the larger shells, about 3 feet in diameter, carried a white-painted identification number probably from a university study, said Lenny Terlep, chief of Conservation Enforcement for the DLNR on the Big Island.

"There's no way to say where they came from," Terlep said. "But the tag may give some indication." He said it is unusual to find this many slaughtered turtles in one location.

Green sea turtles are a "threatened" species, which is one step from endangered, said Conservation Officer Andrew Ford.

The green sea turtle is one of five threatened or endangered sea turtle species native to Hawaii.

The penalty in Hawaii for harming the turtles is a fine of up to $2,000 and not less than six months in jail, Terlep said. The federal penalty is stiffer — a fine of up to $50,000 and not less than a year in jail.

A pair of Kohala men who were caught red-handed slaughtering sea turtles in Upolu in August have been turned over to the U.S. Attorney for prosecution on federal charges, Terlep said. But there are no suspects in the more recent slaughter.

"We're hoping somebody comes forward with information," Terlep said.

Anyone who can help is asked to call 974-6208. Callers may remain anonymous if they choose, Terlep said.

USGS
science for a changing world
Hawaiian Volcano Observatory

June 27, 2002

A weekly feature provided by scientists at the Hawaiian Volcano Observatory.

Hawaiians' view of Hawai`i Geologic History

Many of us look at a landscape and wonder how it got that way and others wonder how they can make money off it even if they don't use Arthur Anderson as an accountant. Unencumbered by modern profit margins and investors, Hawaiian stories reflect just their observations and thoughts about the origin of their island home.

Hawaiians had the idea that the Earth they lived on was the shell of a giant turtle or honu. The Hawaiian word for Earth is "honua", possibly reflecting that origin. While this might seem simplistic now, it incorporates their observations that the surface of our world is curved - an idea that Europeans reluctantly recognized only a few hundred years ago and that a few people still do not accept today.

Oceanic islands were sections of the ocean floor pulled up to the ocean's surface by Maui and his brothers, using the magic fishhook Manaiakalani. This is one of the many Maui stories that is common to Polynesians throughout the Pacific, not just to Hawai`i. Many different versions of the story exist, but the common elements are these: Maui goes fishing with his brothers in a canoe to a specific fishing ground. A large, famous, deep-living creature is hooked. All in the canoe pull together against the hooked creature for days. All in the canoe are ordered not to look back during the fight. Someone does look back, causing the hook to instantly be released.

Some versions of this Maui story are meant to explain why the islands are separate. However, guessing that the islands originate from the ocean floor is astute. The stories could have proclaimed that the islands fell from the sky or were towed

from somewhere else. We're now pretty sure that the islands of Polynesia are volcanic in origin, built up layer upon layer from the ocean floor, nicely matching the Polynesian version.

The story of Pele's migration from her home in the South Pacific to Hawai`i is often cited as evidence that Hawaiians realized the island chain becomes younger from northwest to southeast. The assessment of age progression comes from the direction of her travels once she arrived in the island chain northwest of Kaua`i. She and her family searched for a suitable home on each of the islands, in turn moving generally southeast. She tested suitability with her digging stick, Paoa. Where she dug and encountered water, those areas were deemed poor choices.

The evidence of her test digs is the relatively small cones on the islands of Kaua`i, O`ahu, and Moloka`i. Those cones are now recognized as the result of very late volcanism - after the bulk of each island had been built and erosion had set in. They represent the last volcanism to occur on these older islands. It's easy to see why the Hawaiians associated these features with a volcano goddess. They still look volcanic, while the island of Kaua`i, which was probably two large volcanoes, no longer resembles even one. But the extensively eroded islands must have already been there before Pele arrived. We now know that the island chain does get younger to the southeast but cannot say that the Pele story demonstrates Hawaiians' awareness of that fact.

To continue with one version of the story, when Pele is checking out Haleakala Crater, her sister Namakaokaha`i, who has been searching for Pele in order to destroy her, sees the evidence of digging, attacks her, and destroys her human body. Namakaokaha`i celebrates only a short time before she sees smoke rising from Hawai`i and realizes that Pele still lives in spirit form. Pele has arrived at her new home, and the most logical path to this place was along the island chain. Hawaiians were clearly astute observers and accomplished storytellers, and it can be difficult to separate the story elements contributed by each.

Eruption Update

Eruptive activity of Kilauea Volcano continued unabated at the Pu`u `O`o vent during the past week. The "Mother's Day" lava flow is spreading and inflating at the base of Paliuli with the terminus of the flow located 430 m (470 yd) from the Chain of Craters road. Visitors are allowed to hike out to a viewing area near the active flow.

The two flows emanating from the "rootless" shields are still active, but not advancing. The terminus of the mauka HALP flow has stagnated, and homes in Royal Gardens are no longer in imminent danger of being inundated by lava. However, activity continues in the upper reaches of the flow.

There were two minor earthquakes felt during the week ending on June 27. A resident of Ahualoa felt an earthquake at 6:18 a.m. on June 23. The magnitude-2.3 earthquake was located 10 km (6.0 mi) southeast of Waimea at a depth of 11.7 km (7.0 mi). A smaller magnitude-1.6 earthquake at 5:32 a.m. on June 26 was felt by a resident of Pahala. The earthquake was located 1.6 km (1.0 mi) northwest of Pahala at a very shallow depth.

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How Hawaiian Volcanoes Work

The URL of this page is
http://hvo.wr.usgs.gov/volcanowatch/2002/02_06_27.html
Contact: hvowebmaster@usgs.gov
Updated: July 1, 2002 (pnf)

Date: Tue, 3 Jun 2003 19:57:55 -0700
From: Lisa Choquette <lisa@divemakai.com>
To: Stan Bond <Stanley_C_Bond@nps.gov>, Sara Peck <peck@hawaii.edu>,
Sallie Beavers <Sallie_Beavers@nps.gov>, Marc Rice <mrice@hpa.edu>,
Larry Katahira <larry_katahira@nps.gov>,
Kendra Choquette <kendra@divemakai.com>, Bill Walsh <darkona@interpac.net>,
George Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Cc: Kendra Choquette <kendra@divemakai.com>
Subject: Turtle Rescue!

[Part 1, Text/PLAIN (charset: ISO-8859-1 "Latin 1 (Western Europe)")]
[66 lines.]
[Unable to print this part.]

[The following text is in the "iso-8859-1" character set.]
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[Some characters may be displayed incorrectly.]

Hi, All:

Today, at around 11:45 a.m., at Lead City (Northern Boundary of Kaloko-Hono Nat'l Park), found a turtle under a ledge severely tangled in line (not monofilament). Cut 1 line on back of shell with my knife when she (he??) decided to leave- I was not in a good position to get a good hold on her and lost her. She swam a VERY short distance with a burst of speed then slowed down. She had no use of either her RF or LR flippers- her head was forced back in an abnormal position. I knew pretty much for sure that if I didn' try and intervene, she would die. So I swam after her, caught up to her, and this time was prepared. Grabbed her firmly on front of shell & made VERY rapid ascent to surface. Turtles have not read the PADI manual about slow ascents and safety stops. Of course, got cramps in both legs- thighs and calves! Surfaced and yelled for help. My daughter, Kendra, was captain on board. She got her snorkel gear & camera and leaped in to assist. Client Linda Dondanville surfaced shortly after I did to help! We were about 50 yds. from boat. I went on my back & positioned turtle so her good FF was against my chest, while her injured one was free in the water. Using that hold, she couldn't struggle much. She was breathing fine.

Got her back to boat- Ken climbed up on swimstep and she pulled and I pushed her up on board. We checked her over, flipped her on her back, got rid of some of our gear and went to work. The line went from her mouth to the RF flipper, where it was wrapped around the joint 8-9 times; it had cut into the flesh to a depth of about 1/2 inch much of the way around the flipper. Where we could, cut away from the wound. The line then passed over the back, under the back part of shell, around LR flipper, immobilizing it, but at this point hadn't appeared to injure it. Got all the line off her body while Ken was both photographing and calling Marc Rice on cell phone (tried # I had for you, George- was somebody else). Pulled her mouth open to check to see that line was not down her throat- appeared to be imbedded in her cheek somehow- possibly small hook. Flipped her over, (she immediately started moving both flippers- not strongly- but moving them. We measured her (60 cm), and released her. That was one happy turtle.

If there's anything you can think of that we should have done differently, please let me know. I know I was taking a chance, but I was (and am) quite certain that being unable to eat or move 2 of her flippers, she wasn't going to last until we could get someone to go and

find her and help her.

We'll keep an eye on her, but think she'll make it! The injured flesh did not appear to be infected.

I have the line- Kendra will have pix in week or so (slides).

Cheers,
Lisa

LISA CHOQUETTE
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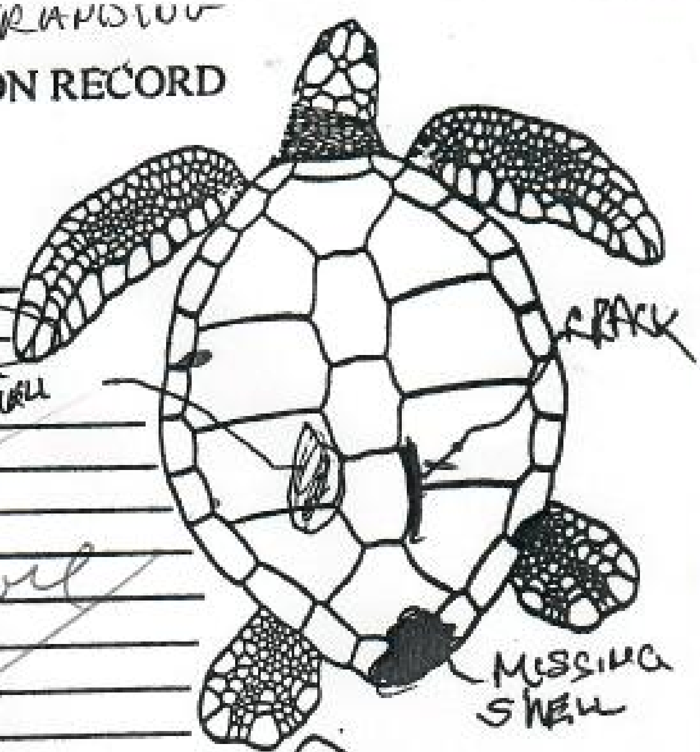
OLIVE RIDLEY - RESTRANDING

LIVE TURTLE EXAMINATION RECORD



Date: 5/26/03

Turtle ID: OLIVE RIDLEY - K. BAY

Comments: Released 4/27 - PREVIOUS MAKUA 3/15/03 WT 64.6 TAG L REAR 442F5D0144

PHYSICAL EXAM

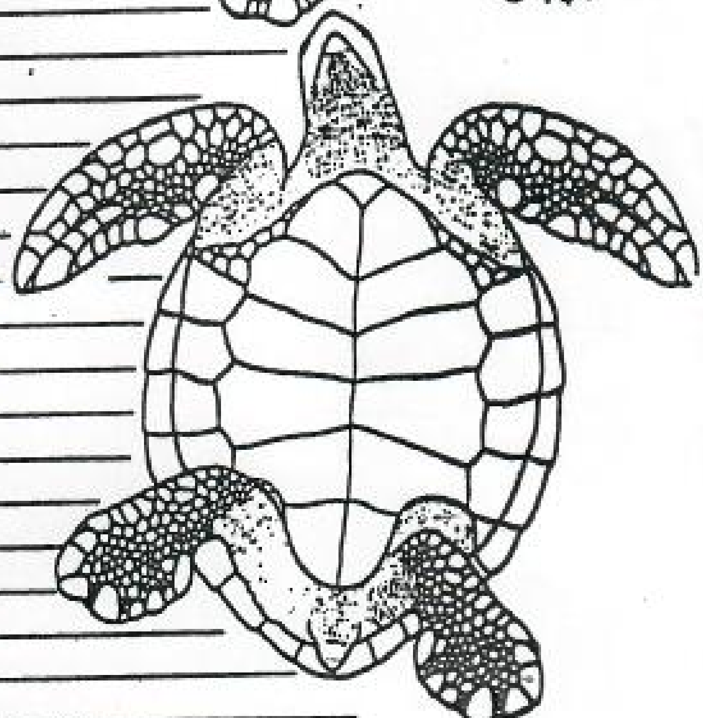
Head and neck: normal

Mouth: normal

Eyes: sunken

Front flippers: normal

Shell: missing scutes & shell large 6"+ patch - tail area missing shell prob. hit by boat.



Plastron: [illegible]

Rear flippers: normal

Tail: swollen

BODY CONDITION: moderate emaciation

SAMPLES TAKEN

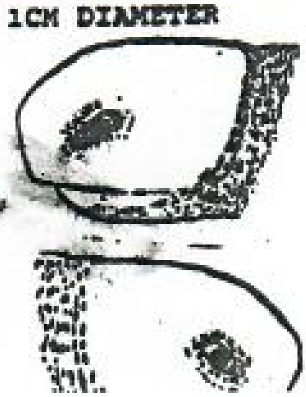
PCV ____ T.P. ____ none

CBC __ Chemistries ____

Others ____________

APPROXIMATE TUMOR SIZE CATEGORIES:

#1 = DETECTABLE PATCH TO 1CM DIAMETER
#2 = >1CM TO 4CM
#3 = >4CM TO 10CM
#4 = >10CM



RECOMMENDATIONS: Probable euthanasia - weak - poor condition - hold overnight - 5/27/03 - dead 6 AM -

Signed: [illegible] + [illegible]

... 400 Uluniu Street Kailua, HI 96734

Ailing turtle netted

RICHARD AMBO • The Honolulu Advertiser

A green sea turtle with tumors was netted and brought ashore yesterday at Magic Island by city lifeguard David Kelly and Sheryl Barretto, a National Marine Fisheries Service research assistant. The turtle, thought to be a juvenile, had been spotted several times during the past week by surfers, said Shandell Eames, a research technician with the fishery service's Marine Turtle Research Program. A veterinarian will determine if the tumors can be removed and the turtle saved, Eames said.

A good year for Big Island's hawksbill turtle population

By Dave Smith
Tribune-Herald

Wildlife officials say it was a good year for hawksbill turtle nesting on the Big Island, and a very good year for one particular, wayward reptile.

A total of 18 female hawksbill turtles were observed nesting at five Big Island beaches over the past six months, including four that had not been seen before. Like the 14 before them, the four newcomers now sport identifying tags.

Larry Katahira, a resource management specialist at Hawaii Volcanoes National Park, said the 18 females was the second highest number observed since tagging began in 1993 and just slightly behind the peak year of 1996.

The four newcomers also represents a jump in newly tagged turtles, which usually number only one or two a year, he said.

"We're getting new turtles coming in," Katahira said.

While researchers would like to think the increase means the population of rare hawksbills is growing, it is more likely the result of increased monitoring efforts.

For example, two nesting turtles were tagged by volunteers this year at Pohue Bay, the first ever at that site. Katahira said this is the first year that the turtle program has been able to send volunteers to the beach on the Kona side of South Point.

Efforts to protect the nests from a myriad of predators

See TURTLES, Page 8

Photo for T-H courtesy George Balazs

George Balazs, left, and two students from the Marine Options Program at the University of Hawaii at Hilo pose with the turtle they rescued from a pond near Punaluu black sand beach.

TURTLES

From Page 1

— which include pigs, mongooses, feral cats and rats — began in 1989 but took off in earnest when funding from the U.S. Fish and Wildlife Service kicked in in 1993.

But since it takes 15 to 20 years for a female hawksbill to reach maturity, it could be another decade before any of the saved hatchlings return to the beach of their birth to lay their own eggs.

For one individual turtle, the presence of the turtle volunteers proved critical this year.

People living around Punaluu had been telling researchers about seeing a turtle in the pond associated with a defunct restaurant located just behind Punaluu's black sand beach.

George Balazs, a turtle specialist with the National Marine Fisheries Service, in November enlisted the help of students in the Marine Options Program at the University of Hawaii at Hilo to search for the animal.

Balazs figured that the turtle was a green sea turtle like the ones that occasionally crawl up on the beach to bask but travel hundreds of miles to the leeward Hawaiian Islands to nest.

But what they found was a much rarer hawksbill.

Through its tag Balazs knew this particular turtle had been seen before at Punaluu when it came ashore to "false nest," sort of a prospecting venture where the turtle pokes around but doesn't lay eggs.

Balazs said since that event occurred in August 1998, the turtle has probably been living in the murky, freshwater pond since that time. He said she may have returned a few nights later, perhaps nested, but then became disoriented and became trapped in the seaside pond.

"It was a prisoner in that pond," he said, adding that it probably survived on stored body fat and whatever crustaceans or other food it could find on the pond bottom in lieu of its usual diet of sponges.

"It's amazing that it was in as good as shape as it was," Balazs said.

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Hawksbill turtles nest every two or three years, laying up to six clutches of eggs in a season two to three weeks apart.

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He said the population of Hawaiian hawksbills, which can be found most of the time foraging off the Hamakua Coast or Maui, also includes an unknown number of male and juvenile animals.

Hawksbills worldwide have been hit hard by those who hunt the reptiles for their shells prized for combs and other items.

However, it is illegal to harm the endangered turtles or to bring into this country anything made from their shells.

This year's activity included the latest visit yet by a nesting female, Katahira said. A female known through satellite tracking to live off Kahului, Maui, laid a nest in November at Kamehame Beach in Ka'u. Those baby turtles won't be emerging from the sand until several weeks after the New Year, making them the first January births in the history of the program.

Kamehame is the most prolific beach for hawksbills in the U.S. with 38 nests laid this year, including eight that have yet to hatch.

Six more nests were observed at Apua Point.


THERE ARE ABOUT 200 SPECIES OF JELLYFISH, AND THEY ARE AN IMPORTANT FOOD ITEM FOR SEA TURTLES, SEABIRDS AND MANY FISHES
UNFORTUNATELY, MANY OF THESE CREATURES OFTEN MISTAKE DISCARDED PLASTIC BAGS AND OTHER PLASTIC TRASH FOR JELLYFISH AND ARE KILLED WHEN THEY SWALLOW THESE ITEMS
IT WON'T BE LONG BEFORE MANY OF YOU WILL BE VACATIONING ON A BEACH, AND KNOWING ABOUT JELLY-FISH MAY HELP IN THE EVENT THAT YOU COME IN CONTACT WITH ONE
JELLYFISH BELONG TO A GROUP OF SPINELESS ANIMALS CALLED CNIDARIANS, FROM THE LATIN WORD FOR NETTLE, A STINGING PLANT...SEA ANEMONES AND CORALS BELONG TO THE SAME FAMILY
THEY HAVE NO EYES, EARS, HEART OR BRAIN, AND ARE ABOUT 97% WATER
MOST JELLYFISH HAVE 3 MAIN PARTS- THE BELL, USED FOR MOTION; TENTACLES, USED FOR STINGING PREY; AND THE ORAL ARMS, USED TO PUSH FOOD INTO THEIR MOUTHS
ONE METHOD OF TREATMENT, SHOULD YOU BE STUNG, IS TO WASH THE AREA WITH ISOPROPYL ALCOHOL OR VINEGAR TO INACTIVATE ANY REMAINING STINGING CELLS...
JACK FIROD
4-4
THEN APPLY A PASTE OF MEAT TENDERIZER, WHICH NEUTRALIZES THE TOXIC PROTEINS AND RELIEVES SOME OF THE PAIN


DODO AND FIROD

OCEAN WATCH

By Susan Scott

• STAR-BULLETIN

Whale watch turns into turtle watch

OVER Easter weekend, I went sailing twice, once off the North Shore and once off Waikiki, to see humpback whales. These winter visitors are in the process of leaving Hawaii for their annual migration north, and I wanted to bid them farewell.

The whales, however, had better things to do than entertain me. There weren't many around, and the few I did see didn't show much of themselves.

But I wasn't disappointed. During both trips, Hawaii's green sea turtles put on memorable performances.

During my first turtle sighting, I didn't even know I was looking at turtles. As we left Haleiwa Harbor, there seemed to be a big clump of debris floating in the water.

But as we drew closer, a familiar-looking head popped up for a breath of air. Then a second head popped up. The bobbing mass was a pair of turtles mating.

Sea turtles nearly always mate in the water, a fact I learned years ago during a trip to the Galapagos. We had just come ashore in a dinghy and were walking toward a beach when our guide stopped us.

"Look," he whispered. "Very unusual. A pair of sea turtles are mating on the beach."

We tiptoed closer and soon realized the two turtles were so enchanted with one another they didn't even notice us. The seasoned guide stared at the couple. "They probably started in the water, and when the tide went out, they didn't even notice."

No one knows what kind of signals sea turtles give one another before mating, but courtship obviously isn't too important to the males. During the mating period, male turtles will mount almost any object that is approximately the right size and shape. This accounts for those stories about turtles amorously approaching scuba divers, rough wooden decoys and even small rowboats.

Sea turtles are gentle creatures, but their mating is not a gentle process. Males bite females on the flippers, neck and head, leaving open sores that usually take weeks to heal. Males also damage the female's shell in the process of hanging onto it with large flipper claws.

Males have it even worse. While mating with a female, a male often gets bites from surrounding male turtles who nip the trailing edges of the favored male's flippers and tail, sometimes causing severe damage. This doesn't usually cause the mounting male to leave, but it does reduce his chances for subsequent pairings.

Females are usually receptive for about 10 consecutive days in a season, and males are sexually active for about a month. But neither is monogamous. Both males and females mate with several individuals in one season.

Once coupled, sea turtles stay that way for up to 10 hours. Contrary to past reports, females do not store sperm between reproductive seasons.

Since mating usually takes place in the vicinity of the nesting spot, my Haleiwa female will probably lay her eggs somewhere on Oahu's North Shore. Hopefully, it will be in a spot far from digging dogs, cats and mongooses.

The day after I saw the mating turtles, I took my sailboat, Honu (the Hawaiian word for green sea turtle), off Waikiki to show my sister and nephew some whales. We didn't see so much as a spout, but just as we settled in the cockpit for an Easter picnic, my nephew shouted, "Turtle!"

Sure enough, a turtle had surfaced just a couple of feet from the boat. It didn't notice us watching over the rail, allowing us a good, long look.

I didn't see many whales over the Easter weekend, but that's OK. Turtles count, too.

Hawaii Tribune-H

76TH YEAR — NO. 297 HILO, HAWAII, TUESDAY, DECEMBER 14,

A good year for Big Island's hawksbill turtle population

By Dave Smith
Tribune-Herald

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Herald

1999 5 SECTIONS — 36 PAGES 50 CENTS

TURTLES

From Page 1

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~Aug. 1998
Hilo - Tribune Herald

Hunting of green sea turtles

In June the Honolulu Advertiser ran an article suggesting that the hunting of green sea turtles (honu) should be allowed on a limited basis for cultural purposes. The rationale used to justify hunting the honu was the increased birth rate observed at French Frigate Shoals. Marine biologist and divers quickly jumped to the defense of the honu and the Advertiser printed an editorial two days later stating that given the current evidence it is too early to be rushing the honu back to the dinner table. The Hawaii Tribune-Herald picked up the original story, but I have not seen anything on the follow-up editorial.

While honu may be hatching in greater numbers on remote islands, when they reach the main Hawaiian Islands many are contracting a virus which causes the growth of debilitating fibropapilloma tumors. The tumors generally grow around the mouth and eyes blinding the turtles and making it impossible for them to feed, resulting in eventual death. Hilo has a high rate of honu with tumors (30 percent). In fact it is almost impossible to make a dive off the Keaukaha coast without encountering honu with the tumors. The 19th Legislature recognized the threat of fibropapilloma tumors to Hawaii's honu by passing Hawaii Senate Resolution 29 in support of the Department of Land and Natural Resources' Sea Turtle Recovery Plan. Marine biologists at the University of Hawaii have isolated the virus, which causes the tumors, and are working to find the cause with the hopes of finding a cure. However, no time frame has been established as to when a cure might be found. If hunting were allowed you could be sure that no one would hunt honu with huge white tumors, further reducing the healthy breeding stock. In this case it seems like the culturally correct thing to do is to place a kapu on the harvesting of honu until this disease has been cured.

Individuals interested in more information on honu and the problems that they are facing should check out **www.turtles.org** on the web.

Thane Milhoan
General Manager
Planet Ocean Watersports, Hilo

Afflicted Ones Not Used for Food

12/8/1966 Herald.

MONROE COUNTY

Warty Turtles Baffle Fishermen on Keys

Down the Ramp Come Tasty Turtles
. . . warty ones aren't eaten

By DAVE WEBB
Herald Correspondent

MARATHON — An investigation is underway in the Florida Keys to find the cause and possible cure of wart-appearing growths on green turtles taken from local waters.

The public need not be alarmed, or refuse to eat the sea delicacy, for all afflicted turtles are being turned over for research and are not being used for food.

Dr. Robert Schroeder, research scientist and turtle raiser, of Lower Matecumbe Key, has requested that any person catching a green turtle with warty growths contact him. His phone number is 664-4858.

He is interested in determining the extent, cause and possible cure of the disease, and would like to have small turtles with such unnatural growths to observe and treat at his turtle observatory on Lower Matecumbe Key.

Schroeder has been instrumental in promoting a turtle restocking program which he hopes will help restore the rapidly diminishing reptiles.

The green turtle is considered the world's most valuable edible reptile.

Among the possible causes of the increasing skin growths could be mutation, pesticides, radiation, chemical fertilizers or concentrations of chemical wastes in certain areas.

Conservation laws have been established in recent years to protect the green and other turtles, which lay their eggs on many Florida coastal beaches, especially the Keys, Dade, Broward, and Palm Beach counties.

* * *

TURTLE MEAT was a diet mainstay for many Caribbean Islanders for several centuries, at least.

Over 90 per cent of all sea turtle landings in Florida are made at Florida Key fish houses. The meat is considered a delicacy here and is shipped to finer restaurants over the nation. There is a turtle chowder soup producer in Islamorada in the Upper Keys.

Edison "Blackie" Cruz, who manages a turtle hatchery and observatory on Ramroad Key, for State Senator John Spottswood, said that one type of wart growth had been rarely observed for a number of years on specimens taken from local waters. Cruz has 165 green and loggerhead turtles in his hatchery and has been interested in the sea reptiles for over 40 years.

Cruz, Schroeder, and others have released thousands of turtles during the past seven years after caring for them until they reach hand size or larger.

* * *

THE MORTALITY rate of green turtles, and other sea turtles, when hatched naturally is said to be over 90 per cent during the first few weeks of their lives. Animals, birds, fish and shark are known to feast on them when they are very young.

Thousands of sea turtles are hatched on Florida beaches each year and literally hundreds of persons in South Florida help place them in sea waters when they become confused because of man made lights along beaches and crawl to highways instead of the ocean.

"To the best of our knowledge, no turtles released in our re-stocking program have had, or developed, the unusual wart-like condition," Schroeder state again Wednesday, after investigating the situation since it was called to his attention by Ted Clark of Marathon, Friday.

76TH YEAR — NO. 146 HILO, HAWAII, SUNDAY, JUNE 20, 1999

Punalu'u residents

❒ Nesting habits of rare hawksbill turtle are major concern

By Janet Snyder
Tribune-Herald

PUNALU'U — Punalu'u residents and environmental officials want Hawaii County to close off the beach road to tour buses, which drive up to nesting grounds of the rare hawksbill turtle.

Pele Hanoa, a Punalu'u community leader, told a group of County Council members and residents that excursion buses drive right onto the black sand beach daily, disturbing the egg-laying process.

The buses deposit onto the rapidly-eroding dunes some 500-1,000 tourists, many of whom poke and prod the turtles.

"This is all honu grounds. It hurts the honu," Hanoa said.

Pointing to a narrow entryway to the beach, she suggested a gate to bar the buses, but not tourists altogether.

"We just want to block off part of this road so the honu can come back and lay their eggs," Hanoa said.

Hawksbill turtles are among the rarest turtle species, with only about 44 known nesting females in the state, and for 90 percent of them Punalu'u beach is their preferred nesting ground, according to Volcanoes National Park research management specialist Larry Katahira.

Katahira, who has monitored the turtles for the past decade, said he agreed with Hanoa on the need for a gateway to bar traffic from entering the beach to protect the turtles.

LOUIS

K. HANOA

"We had two turtles try to nest the past few days, but they got scared away by the traffic, even in the middle of the night," Katahira said.

They made repeated attempts to nest but were too disturbed to lay eggs, he said.

As the group, organized by council member Julie Jacobson and attended by council colleagues Dominic Yagong, Nancy Pisicchio and Curtis

See TURTLE, Page 8

7 SECTIONS — 82 PAGES ONE DOLLAR

seek bus ban

Tour buses unload passengers Thursday at the beach at Punalu'u. The heavy traffic has caused concern for nesting hawksbill turtles.

T-H photo by Robbyn Peck

TURTLE: Punalu'u residents seek ban of buses

From Page 1

Tyler, surveyed the scene, a half dozen full-sized tour buses rolled up to the beach.

Katahira said that in desperation he and his workers put a fence around the nest of one intrepid mother turtle so that it wouldn't get run over.

"This beach is really good for hawksbill nesting if we can restore it right now," Katahira said.

Councilman Tyler indicated that the county may move to protect the animals under the Federal Endangered Species Act.

"We can make it more restrictive (than the federal law) but not less restrictive," Tyler said. "There is a conflict with the Endangered Species Act."

Another problem the buses pose is the nuisance of tourists intruding onto the neighbors' beachfront property in search of restrooms.

Lois Lewis, a Punalu'u beach homeowner, said: "I have 20 to 40 Japanese tourists in my front yard a day. They go to the bathroom in my yard."

Another serious concern, residents said, is that of public safety.

Pele Hanoa's daughter Keolalani, a Hawaiian cultural educator whose house faces the beach and who is the daughter of kupuna Pele, told the Tribune-Herald: "(The buses) speed here at 45 miles per hour and I've made calls to Roberts and Jack's Tours for years, but nothing happened.

"My kids have been dodging these tour buses for years," she said.

Punalu'u, whose white-cap-swept seas are fed by freshwater springs, should be an idyllic recreation spot.

But Keolalani and Pele Hanoa showed the inspection group a homeless encampment in one of the beach's two pavillions.

Residents have been chased away from using public barbecue pits by the squatters, who took the facility over about six months ago, they said.

They also posed a threat to the turtles.

Some of the homeless people have set cross nets overnight — far beyond the legal four-hour limit, and neighbors found and released two turtles trapped in the nets this week.

Council member Jacobson plans to report on the Punalu'u situation to the County Council at the next meeting on Wednesday.

Hawaiian Green Sea Turtles

get the help they need

Last issue we updated you, our readers about the Hawaiian Green Sea Turtles and the laws implemented to protect them. Even though much is done, on a federal level, to protect the Green Sea Turtles they are still vulnerable to their natural environment.

In recent much has been published about the health of the Green Sea Turtles. The North Shore of Oahu becomes the ideal location for a new

Turtle Hospital and Research Facility. It's ideal because of the high number of injured sea turtles found on Oahu's North Shore, and the relatively clean waters makes it an area for better research.

Even though the population of Green Sea Turtles has declined dramatically in the Pacific Islands they are demonstrating some encouraging signs of recovery, after seventeen years of protective efforts. At one time there was at least several million Green Sea Turtles. Today fewer than 200.000 females are thought to remain. In fact in Hawaii, scientists estimate that only 100 to 350 females nest each year. The main factors believed to have caused the decline in the Green Sea Turtle population are hunting, effects of some fisheries, marine debris, coastal development and fibropapilloma.

The most recent cause of death to the Green Sea Turtles is a disease called fibropapoilloma. These are a form of tumors which are lobe-shaped, infecting the soft portions of a turtle's body. These tumors grow primarily on the skin, but also appear between scales and scutes, in the mouth, on the eyes, and on internal organs. Once turtles are stricken with the disease they do not appear to recover. The tumors often spread to many parts of the body, ultimately killing the turtles. According to George Balazs (Honolulu Laboratory Southwest Fisheries Science Center of National Marine Fisheries Service, NOAA), it's a disease as tragic as cancer. The disease runs rampant in juvenile turtles.

Even though the cause of disease is not know yet, scientist suspect that a virus, parasite of the effect of marine pollution may be involved. More than 15 researchers in the United States are racing to identify the cause and possible cures for the disease. One of these researchers, Thierry Work, a wildlife disease specialist in the United States Geological Survey, reports that fibropapilloma may be caused by a herpes virus. But this has not yet been proven.

Before protective laws, the meat of the Green Sea Turtle was used for food, mainly in turtle soup. They were also killed and used to feed fishing crews in the Northwestern Hawaiian Islands and to provide meat in restaurants. They have been hunted to make jewelry and ornaments, their skin was used to make small leather goods, their meat and eggs for food, and their fat for oil. In modern times, the number of sea turtles taken has increased dramatically due to the opportunity for profits they provide through commercial trade.

Still other causes of sea turtle deaths are incidental catch in fishing gear. Commercial shrimp fishers use nets that trap and drown more than 10,000 sea turtles each year. Turtles could be saved if shrimpers used devices, called turtle excluder devices (TEDS), which keep turtles out of the nets. However there are laws that require shrimpers to use such devices. Thousand of sea turtles become entangled in longlines, driftnets, coastal gill nets and other fishing gear.

Marine debris is yet another killer to the sea turtles. Turtles become entangled in the debris. They also mistake debris for food and ingest it. Particularly harmful to the turtles is plastic. If ingested it will remain in their stomachs for long periods of time, releasing toxic substances. It can also clog the turtle's digestive system, which will block the regular passage of food, resulting in starvation.

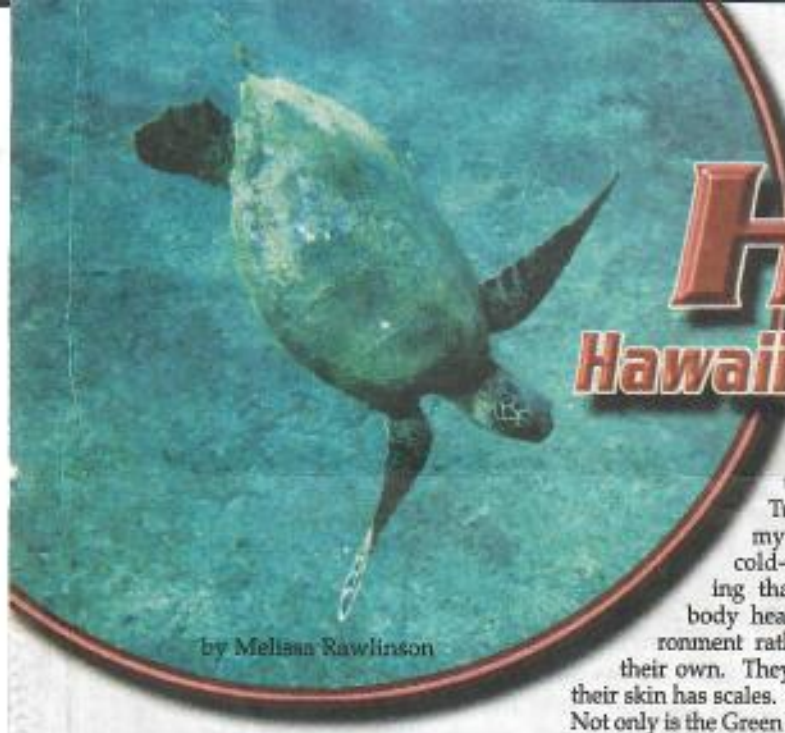
Coastal development, causing noise, lights and beach obstruction disturbs the nesting area for turtles, leaving females without a familiar place to lay their eggs. Some turtles will decide to nest elsewhere, but most turtles will not nest at all.

Remember any individual help will matter, a little bit from everyone is a whole lot of everything. The best thing we

can do, to help protect such a prehistoric species, is to educate ourselves and do our part in keeping them safe. Unfortunately, money is hard to get, making it difficult to fund the kind of sustained project that would have the best chance of succeeding. If you would like to get more involved in helping the Green Sea Turtles contact Marlu West at Save the Sea Turtles International (637-6417), or Ken Nichols at North Shore Diving Headquarters. To find out more information log onto http://www.turtles.org/tumor.htm

--M.Rawlinson

Photos courtsey of Ken Nichols.



Honu
Hawaii's Green Sea Turtle

by Melissa Rawlinson

Have you often wondered how fortunate you are to have one of God's special creations pop up next to you when you're out in the line-up waiting for that perfect tube ride?

In Hawaii the life of a sea turtle(honu) is a symbol of sanctuary, as well as a personal family deity(aumakua). Sea turtles, specifically the Green Sea Turtle, have survived since prehistoric times, BUT will they remain for years to come?

"Today I found an endangered Green Sea Turtle (since named "Chance"), with a nonfunctional left front flipper. Fishing line was wrapped around both the fins and the neck. Around the tangled fin area there was severe swelling at least double the size of the unharmed fin. The line had cut deep into the tissue and it was obvious that the impending infection would cause a painful loss of the fin and almost certain death. Even if the turtle hadn't died from the line around the fin, the line around the neck was wrapped so tightly, approximately seven to eight inches. It was certain death." This incident was witnessed by Ken Nichols, owner of North Shore Diving Headquarters, who has aided in many turtle rescues. Recently from July 3rd through August 15, 1999, he participated in ten sea turtle rescues. The rescues that occurred during these 45 days, happened in a very short distance from Pua'ena Point to Three Tables (North Shore). Of these ten turtles three had amputated fins.

There are four of seven species of sea turtles that can be found in Hawaiian waters. They are the Green Sea Turtle (Chelonia mydas), the Hawksbill (Eretmachelys imbricata), the Leatherback (Dermochelys coriacea), and the Olive Ridley (Lepidochelys olivacea) common to Hawaii. Of these the most popular is the Green Sea Turtle (Chelonia mydas). They are cold-blooded, meaning that they get their body heat from the environment rather than making their own. They breathe air, and their skin has scales.

Not only is the Green Sea Turtle unique because its ancestors evolved on land and returned to the sea to live about 150 millions years ago, but even more interesting is that they are capable of containing higher concentrations of carbon dioxide in their blood, which compared to other air breathing animals, enable them to use their oxygen very efficiently. However, juvenile turtles have not developed this ability therefore they sleep afloat at the water's surface. Their body characteristics are not like any other species. They are able to rid their bodies of excess salt. Behind each eye is a salt gland, which helps the sea turtle maintain a water balance by shedding large "tears" of excess salt.

They begin their life by digging their way out of the sand where they have hatched and then scurry toward the ocean past predatory birds and crabs. Only those who have survived drift on in sea currents, subsisting on fish eggs and small crustaceans. Since sea turtles live most of their lives in shallow waters they are terribly vulnerable to the excesses and carelessness of the human species.

In 1996 the Green Sea Turtle was still considered endangered. Now four years later they are considered threatened, but still protected by the Endangered Species Act (ESA). The ESA is a federal law passed by the United States Congress in 1973 which protects both endangered species, defined as those "in danger of extinction throughout all or a significant portion of their range," and threatened species, those likely to become endangered "within foreseeable future." The ESA has proven to be effective in helping to protect species. It has served as a model for the development of similar protection laws in almost every state and in other countries. Two federal agencies are responsible for enforcing the Endangered Species Act. The U.S. Fish and Wildlife Service and the Department of the Interior administer the Act for animals and plants on land or in fresh water. The National Marine Fisheries Service of the Commerce Department administer the Act of marine plants and animal. If you see a sea turtle or for that matter any other marine species in danger notify either departments.

According to the National Wildlife Federation, about 90 percent of Hawaii's Green Sea Turtles nest at East Island and it's neighbor islets, known collectively as French Frigate Shoals. In addition to nesting here, the Green Sea Turtle also goes ashore to bask there—something rarely seen elsewhere in the world. It is said that the turtles do this to relax and warm themselves out of the reach of sharks. As late as 1959, mass killings of turtles on these beaches occurred. Fishing companies took more than 25 percent of the nesting sea turtles in one season. Finally, in 1960 the federal wildlife officials began year round patrols at these beaches (which are part of the Hawaiian Island National Wildlife Refuge). These patrols ended the hunting of turtles at their nesting beaches. Yet years later sea turtles were still being killed in large amounts. According to the National Academy of Sciences, as many as 55,000 sea turtles were killed annually, before regulations protecting sea turtles were implemented under the ESA in 1989.

The threats to the Green Sea Turtles are mainly due to excesses and carelessness of the human species. In fact the most serious threat is caused by "left behind" fishing line, fishing nets, and pollution in near shore waters (which might be contributing to the tumor growths). Think about it...imagine all the polluted natural run-off, mixed with everything from our storm drains including residues from car oil to neglected litter. Now imagine it in your living room.

Now a days the turtles coming ashore are doing so for help. So as players in the ocean do your part in helping to keep a very unique species alive.---M.Rawlinson

More about Hawaii's Sea Turtles in High Surf Advisory # 8

Mauna Lani Resort photo

One of 10 green sea turtles being kept at an ocean water pool at the Mauna Lani Bay Resort pops up for a breath of air and a look at the world above the water. A small transmitter has been attached to its shell to allow researchers to track its movements after it is released today in a study of turtles hatched and raised in captivity until they are mature enough to escape most predators.

Electronic tags aid in keeping tabs on turtles

New batch of young to go forth today

By HARRY EAGAR
Staff Writer

NAPILI — Today is the 228th American Independence Day and the 14th Turtle Independence Day.

Maui's most famous green sea turtle, 5690, most likely will spend the day munching seaweed and loafing around Napili.

Her godfather, George Balazs, will spend the morning releasing about 10 more juvenile turtles from the Mauna Lani Bay Resort on the Kona coast.

Some other turtles Balazs and his colleagues are tracking are somewhere in the central North Pacific Ocean. Researchers know pretty precisely where, too, because for the first time tiny radio transmitters are beginning to reveal where turtles go when they swim off.

As far as turtle tracking goes, 5690 is one of the least interesting subjects. Since her last nesting in Lahaina in 2002, she swam up to Napili and has pretty much stayed there.

Others, such as a Maui turtle named Nakine, have had far more interesting

See TURTLES
on the next page

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tion
pinch
Page A3

FRIDAY
July 4, 2003

TODAY'S FORECAST FOR THE CENTRAL VALLEY
Sunshine and patchy clouds. ***Complete report on A2***

Sister act

Serena, Venus Williams in final

On Page B1

The Maui News

Maui's Newspaper Since 1900

Turtles

Continued from Page A1

travel itineraries.

But 5690 may have been a distance traveler when she was younger. Balazs, who works for the National Marine Fisheries Service Pacific Islands Fisheries Science Center, released her and dozens of others off the Big Island more than 20 years ago. Some of those turtles, then not much larger than Balazs' hand, had flipper tags. Only one has since been seen, 5690, but she has become an old reliable.

In 2000, she nested at Lahaina, the first of the threatened Hawaii green sea turtles to do so in half a century. She came back and nested several times in 2002, and Balazs is confident she will be back next year, since she is on a two-year schedule.

And she seems healthy. Although many Maui turtles are infected with fibropapilloma virus, which causes debilitating tumors, 5690 shows no sign of that.

Balazs saw her himself a few months ago off the Gazebo Restaurant at the Napili Shores Resort, and a scuba diver spotted her a couple of weeks ago.

"He was quite happy," says Balazs, when it was confirmed that it was Maui's famous turtle mother.

Balazs and volunteers glued a radio transmitter — about the size of a cigarette pack — to 5690 during one of her nights ashore laying eggs last year, and it kept sending location information to tracking satellites for 289 days. Then the battery gave out.

She had traveled around 3,000 miles in nine months, but just shuttling up and down the coast of West Maui.

Nakine, another transmitter turtle raised at Maui Ocean Center, went much farther out. Nakine was hatched in September 2000, and on March 8, 2002, she was set free.

She left Maui and within a couple of weeks was browsing off Kau at the southern tip of the Big Island.

Then she swam hundreds of miles almost due west before turning northeast. She reached Oahu in late April and has since been hanging out on the North Shore.

But that journey is trivial compared with the swim of 22270, which was released at Mauna Lani in June 2002.

This turtle, moving at an average of about a quarter of a mile an hour, moved around the south of the Big Island and then swam hundreds of miles to the north before turning west.

In early September, 22270 was-between Necker and Nihoa islets in the Northwestern Hawaiian Islands and kept going west and south, until on Sept. 19, when it was about at the latitude of Maui, it

Transmitters have been fitted to green sea turtles' shells to let researchers track their travels.

Mauna Lani Resort photo

headed east.

It soon swam around Kahoolawe, checked the area around Wailea and Makena and then set off on a circuit of Maui, going clockwise.

This turtle, after a voyage of more than eight months, set up housekeeping not far from its release point, although it does take lengthy excursions southwest of Kona at times.

Hawaii's green sea turtles are homebodies compared to another group Balazs is helping to track. Hawaii greens — except 5690 — nest at French Frigate Shoals now, although they used to nest on the main islands.

In Japan, the Port of Nagoya Public Aquarium is using similar technology, and Balazs' Hawaii experience, to track the much-larger loggerhead turtles. These are pelagic, compared to the shore-hugging greens.

In April, seven juvenile loggerheads — Ami, Mika, Taro, Urashima, Kamoi, Lilo and Nori — were released from a research vessel off the east coast of Honshu.

In the next two months, they all pursued a meandering easterly course. By early June, they were about one-fifth of the way to Hawaii, still on roughly the latitude of Tokyo and more or less north — though hundreds of miles north — of Guam and Saipan.

This morning, Mauna Lani Bay Resort will be freeing nine or 10 turtles, raised by Sea Life Park Hawaii. The smallest, 9 months old and only about 10 inches across, has been idling in the resort's pool for a while.

If it and the others pass veterinarian Bob Morris' last-minute checkup, they'll be launched into the ocean, some from shore, others from afloat. Three or perhaps four will carry transmitters.

"We've never really been certain where the honu went after we released them," says Sandie Patton, the resort's honu administrator.

"Do they just stay after we release them, or do they go somewhere then come back?"

The trail of 22270 shows that at least some of them go somewhere and then come back. By the 15th Turtle Independence Day next year, it should be clear whether that is the usual behavior or whether 22270 was just an individualist.

Hōkūle'a: Sailing master impressed by 'sheer number of birds' at French Frigate Shoals

FROM PAGE A25

clouds.

And it's a surreal thing at French Frigate Shoals. In the distance are your standard gray and white clouds, and nearby, the clouds are distinctly, unmistakably green to the naked eye. Seen through Polaroid sunglasses, they positively glow.

The white undersides of birds flying over the lagoon also turn green.

On Friday, the crews of Hōkūle'a and the escort motorsailer Kama Hele helped with a sea bird protection project on Tern, hauling sheets of steel plate to cap a 60-year-old rusting seawall that was trapping young sea birds. The still-flightless chicks would waddle to the edge and fall between sheets of flaking steel — often injuring themselves.

The canoe and escort crews were amazed at the wildlife. Crew members dove at La Perouse Pinnacle, where they swam with 6-foot white-tip sharks, a passing seal, a turtle nearly a yard across and a large ulua.

"They turn black when they're angry or aggressive," Kosaki said.

Coral reef researcher and crew member Kanako Uchino, from Japan, said the ulua surprised her.

"It doesn't look like he's scared. He just come close to me, and swing around me and constantly coming back to me — like he was checking us out instead of us checking him out," Uchino said.

Sailing master Bruce Blankenfeld said that's what was special about the French Frigate Shoals wildlife. "The wildlife, they're at home there. They're comfortable. They're unthreatened.

"I was impressed by the sheer numbers of birds. They are an integral part of this planet, this ocean planet, and the health of the planet depends on the ocean. I've never seen that kind of numbers. It gives you a good feeling to see that kind of abundance," Blankenfeld said.

Marine researchers from a variety of agencies participate in research at French Frigate Shoals, working out of an old Coast Guard facility on Tern, the largest of the reef's islands.

Researchers collect all kinds of data, from shark-attack scars on seals to assessments of their scat and spew, said Suzanne Canja, a Maui resident who is the field camp leader for the monk seal team of NOAA Fisheries, an agency of the National Oceanic and Atmospheric Administration.

"Almost every adult seal has shark scars," said Dan Luers, a marine biologist from Ohio in his third season at Tern.

In 1997, there was a persistent problem of male seals "mobbing" or attacking females and pups. Many pups died, and Galapagos sharks started feeding on them around Trig Island. Since then, Galapagos sharks have been returning annually to eat seals during the pupping season.

That's just one of the problems seals face. Some estimates are that there were as many as 2,500 Hawaiian monk seals in the 1950s, but the population declined to about 1,300, despite massive research for more than a decade.

Some researchers believe that the Northwestern Hawaiian Islands are a source of other marine life in the main islands as well, that larvae from the abundant marine life here help resupply Hawai'i's depleted reefs.

"There is a very nice hopeful spirit, to be next to the extraordinarily diverse abundance of life," Thompson said.

The double-hulled canoe's mission, in part, is to bring home to the people of Hawai'i the possibilities of a healthy environment, the kind found in the Northwestern Hawaiian Islands.

"That sense of wildness makes me feel better, makes me feel hopeful," Thompson said.

Q&A: Phosphorescence in your wake?

Q. Do you see any phosphorescence at night in your wake or elsewhere? — Bradley Shields

A. There has been quite a bit of phosphorescence. The little bits of glow run along the sides of the canoe as it moves through the water at night and swirls in our wake. When waves are big, they sometimes wash into open areas near the canoe's stern, and you can sometimes see bits of glow in the water there as it pours out the scuppers, which allow water to drain away from the vessel.

Hōkūle'a: Canoe leaves tomo

FROM PAGE B1

tall volcanic formation.

Hōkūle'a sailed to an anchorage about a mile from Tern Island, dropped one anchor off the right, or starboard, side and another off the port side. The escort boat Kama Hele tied up to an existing mooring nearby. Some crew members chose to sleep on board and others at the U.S. Fish and Wildlife Service center on Tern, a former Coast Guard station that has a 3,000-foot coral runway. One crew member Na'alehu Anthony, was to leave the vessel and take an empty seat on a chartered Fish and Wildlife Service flight. That leaves a crew of 12 on the canoe.

The vessel was to spend last night and tonight at the atoll, visiting with and perhaps working with marine researchers studying protecting sea birds, monk seals, turtles and others of the multitude of creatures that inhabit these islands and reefs.

One thing the crew was ready for was normal sleep. Life on the canoe is not constant work, but it involves being awake much of the time and at inconsistent hours depending on the canoe's needs.

Someone's shift might be over as the canoe reaches an island, but the whole crew is expected to participate in the anchoring and settling-in process, and then a crew member might be assigned to anchor watches. When the canoe sets sail in the morning, everybody's involved again. As much as six hours of steady sleep is a luxury.

Most crew members have other duties besides their shifts sailing the canoe. Some have developed specialties in cooking meals, notably sailing master Bruce Blankenfeld and master fish-cooker Russell Amimoto, whose nickname is the "Iron Chef." Blankenfeld and Amimoto are also the canoe's main fishermen.

A valued crew member who asked that his identity be withheld is sometimes called "Snack Daddy," for the breadth of his stores of sweets.

Several crew members participate in daily satellite radio interviews with schoolchildren.

Until his departure from Tern Island, electrical wizard Anthony kept track of battery power, wiring, solar charging and radio equipment. In his final hours on the canoe, he was frantically giving lessons to other crew members in how to take care of the equipment.

Another valued skill on board is making do, which can run from

Q&A: What's the navigator's background? What do you eat?

Q. Could you provide us with a little more background information on the navigator, Ka'iulani Murphy? — D. Imoto

A. Murphy, 25, was raised in a farming family in Waimea, Hawai'i. As a child she worked in her mother's family taro patches in Waipi'o Valley. She remembers that her class took a field trip to see Hōkūle'a when she was in elementary school. In college, when she learned that Nainoa Thompson was teaching a navigation course, she took it. She has continued her navigation studies and has voyaged considerably. She has a degree in Hawaiian studies and is on the educational staff at the Polynesian Voyaging Society.

Q. What do you eat? Just fish? I love sashimi. I go to Hawai'i Kai Baptist Preschool and my mommy is reading about Hōkūle'a to me. — Alana Ako, age 5

A. We have stored food in case we don't catch fish, but we've been lucky with two mahimahi, an 'ahi and an uku, a deep-sea snapper. We had mahimahi sashimi with a mayonnaise-wasabi-shoyu sauce.

Ask the crew a question by going to the.honoluluadvertiser.com/hokulea/ganda.

rrow for Gardner Pinnacles

converting duct tape into all manner of things, to a successful invention of a way to install grommets in a sail when no specialized equipment is available. The system involved a Swiss Army multipurpose tool, a hammer, a screwdriver, a wide chisel and a pair of pliers.

Tomorrow morning, the vessel is to leave early for the next speck of dry land up the Hawaiian archipelago, Gardner Pinnacles — two rocky landfalls, the largest of which is only 300 yards long. But they are surrounded by 600,000 acres of coral reef habitat with at least 27 species of corals.

Advertiser science writer Jan TenBruggencate is a crew member aboard Hōkūle'a during the voyaging canoe's trip through the Northwestern Hawaiian Islands. He will be sending back regular dispatches via satellite.

A sleep break near Tern Island

By Jan TenBruggencate
Advertiser Science Writer

The Other Hawai'i

A voyage to the Northwestern Hawaiian Islands with Hōkūle'a

Follow Hōkūle'a online at www.honoluluadvertiser.com

FRENCH FRIGATE SHOALS, Northwestern Hawaiian Islands — A young sea bird hitched a night-long ride on Hōkūle'a's stern from Mokumanamana to French Frigate Shoals, lifting its wings to gracefully fly off only as the voyaging canoe approached the reefs.

While aboard the canoe, the booby alternately tucked its head into its back feathers, peered at the unfamiliar humans moving around on deck, and swung its beak in the brisk night wind.

Hōkūle'a ended its non-instrument navigation experiment after sailing two 150-mile-plus ocean channels to tiny islands. The voyages once more proved the effectiveness of Nainoa Thompson's system of navigation, and proved again that it is a system others can learn.

Yesterday morning, crew members kept watch from the bow for coral heads, using charts, dividers and two handheld global positioning system units to pilot through the reefs.

Once it tucked into the lee of the eastern end of the French Frigate Shoals reef, Hōkūle'a got relief from a large running swell. The 62-foot vessel surfed the waves and occasionally swooped off course as it slid down faces longer than the canoe.

In the lee, it picked up a good wind and cruised at 10 mph. It steered around the southern side of La Perouse Pinnacle, a rock outcropping south of the island's main reefs, which is all that remains of the once-

See HŌKŪLE'A, B5

JAN TENBRUGGENCATE • The Honolulu Advertiser

Hōkūle'a navigator Ka'iulani Murphy checks out a hitchhiking booby. To the left of the bird are a carved image and the satellite phone antenna dome.

Crew sets sail for Laysan

By Jan TenBruggencate
ADVERTISER SCIENCE WRITER

TERN ISLAND, French Frigate Shoals — It starts with the green clouds, and as you get closer to this 22-mile-long reef complex, the amazements just keep coming.

Overhead are hundreds of thousands of wheeling birds; on the beaches, green sea turtles not much smaller than a Volkswagen and Hawaiian monk seals bigger than NFL linemen.

In the water, the wildlife all seems oversized by main Hawaiian Islands standards. Big scarred ulua, huge nenue, whitetip sharks, tiger sharks, Galapagos sharks.

The waterline on La Perouse Pinnacle could have been painted by Van Gogh, with vibrant blasts of colors — yellows, lavenders, greens, reds and more. The algae are so rich because they are fertilized by the guano that whitens the top of the pinnacle and seeps down the sides when it rains, said Hōkūle'a crewman Randy Kosaki, a marine biologist with the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve.

The crew of the voyaging canoe Hōkūle'a sailed up to French Frigate Shoals Thursday and stayed two nights before leaving yesterday morning for a 2½-day sail to Laysan Island. Continuing east winds and swells prompted Captain Nainoa Thompson to bypass Gardner Pinnacles. He said the downswell sail from Gardner to Laysan would be too hard on the canoe and crew.

The crew spotted the green clouds over the reef immediately. They are known in the South Pacific as a tool for native navigators. Long before you spot an atoll, you can often pick up the green of the atoll's waters reflected against the

See HŌKŪLE'A, A27

The Other Hawai'i

A voyage to the Northwestern Hawaiian Islands with Hōkūle'a

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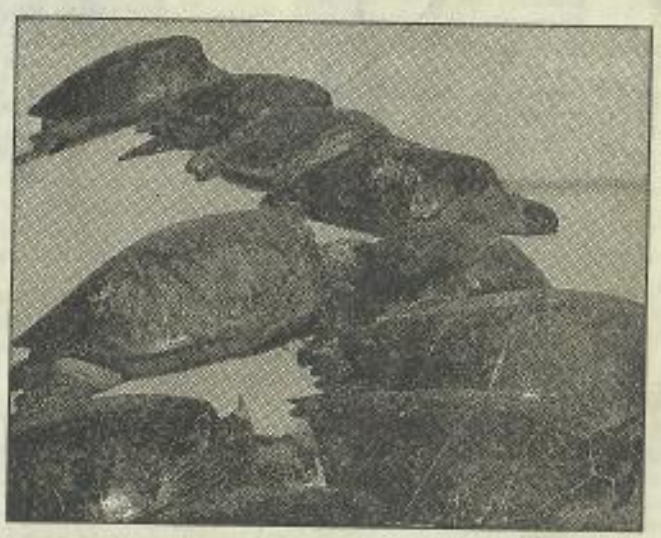

NOAA Fisheries

Massive green sea turtles haul up on French Frigate Shoals sandbars during the breeding season.

Canoe turns back

Hōkūle'a turned back toward Tern Island last night because of an injured crewmember. The voyaging canoe was being towed back to French Frigate Shoals because the wind was against it.

The crewmember fell against a wooden railing and suffered a back injury.

Dr. Cherie Shehata said that it was not an emergency situation, but that the crewmember — who asked not to be identified — needed medical attention that was available on Tern Island.

Hōkūle'a was about 60 miles out when it turned back. It was not known what effect the situation would have on the remainder of the voyage.