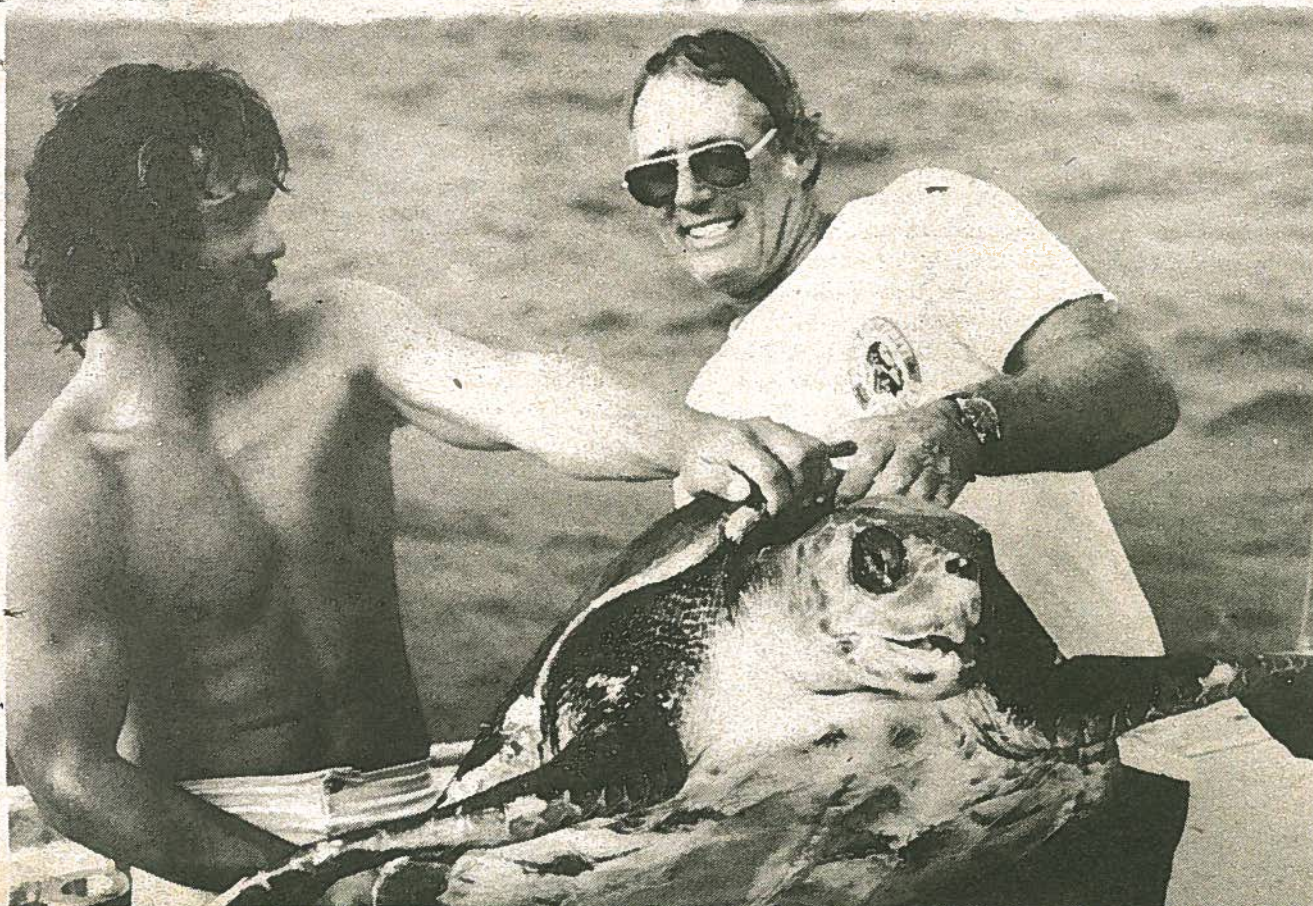


Hawai'i's Fishermen Help Sea Turtles

by George Balazs



Capt. Peter Hoogs and Lincoln Ahlo releasing an adult female olive ridley they found entangled in a piece of trawl net off Kona Coast.

Over four years have now passed since Capt. Alana McKinney told the readers of HAWAII FISHING NEWS about her rescue of a lost and injured loggerhead turtle off O'ahu. Since that time only a few short notes about sea turtles have appeared in these pages, so I thought an article on the subject would be of interest.

■ A good way to begin is to first say what may seem obvious — sea turtles are not fish. Biologically speaking, sea turtles are a very different kind of marine life requiring careful management due to their life history and behavior. Not everyone realizes this important point. Sea turtles are, in fact, air breathing reptiles that mature at a large size only after many years of slow growth. No one knows just how long they can live, but it may be for many decades. It takes anywhere from 10 to 60 years for a turtle to become an adult. Once mature, their size affords reasonably good protection against predators, with the exceptions of man and large sharks. Sea turtles differ significantly from fish in other ways. When it comes time to breed, sea turtles travel back to certain beaches where they mate and the females crawl ashore at night to nest and lay eggs. Breeding migrations can span many miles of ocean and are truly amazing feats of navigation. Scientists have yet to explain just how they are accomplished. After the eggs hatch out in the sand, the new-born turtles dig up to the surface and instinctively swim away from the beach out to sea. Somewhere off in the pelagic environment the turtles live for up to three years before changing residence to shallow areas near land. During these early years of life their small size makes them vulnerable to a variety of predators. We don't know just what percentage gets eaten, but it is thought to be considerable.

There are three kinds of sea turtles that regularly appear here in the Hawaiian Islands. The green turtle, known as *honu*, is present in the largest numbers. The other two species are the hawksbill, which can have poisonous flesh, and the leatherback, a huge creature that frequently passes through our islands waters. Two other far less common sea turtles which only occasionally show up in Hawai'i are the loggerhead and the olive ridley.

Hawai'i's green turtles live along the coastlines of our main islands, but migrate to breed at French Frigate Shoals in the Leewards. If a green turtle resides in Kane'ohe Bay, this migration would involve a round-trip voyage of over 1,000 miles. Trips like this burn up lots of body reserves, consequently they are only made once every couple of years or more. Most of the green turtle's life is spent foraging in underwater pastures of marine plants (*limu*) and sleeping nearby in deeper areas that offer shelter. While resting motionless on the bottom,

large turtles can stay underwater for up to 2½ hours. However, when actively feeding they must surface to breathe at intervals of about 5 to 10 minutes. These daily habits of feeding and sleeping take place mostly at key locations where environmental conditions best suit the turtles' needs. Consequently, for an experienced person, green turtles are relatively simple to catch with the aid of modern gear such as scuba, spearguns, long synthetic tangle nets, grappling hooks, hand-thrown harpoons and powerheads.

In the past, green turtles in Hawai'i were extensively used for both commercial and noncommercial purposes. There were no legal controls on the taking of green turtles before 1974, so by the time some measure of protection was finally implemented there was a valid concern whether or not the stock could remain viable. The commercial demand that existed for turtle meat was created mostly by restaurants catering to Hawai'i's ever-growing tourist industry. However, it is nice to recall that some of the more conservation-minded establishments, including Fisherman's Wharf at Kewalo Basin, voluntarily halted their purchases before any laws went into effect. The noncommercial catching of green turtles was done for sport, to get the shells for decoration, and as a cheap source of meat for home use that could be obtained from a small financial investment in gear. All of this past exploitation in Hawai'i was by no means confined to the waters of the main islands. Continuing at least until 1959, green turtles were also taken while they were nesting on the beaches at French Frigate Shoals where they were easily flipped over. Using a small military landing strip on one of the islets within the Shoals, shipments were flown back to markets in Honolulu by private aircraft.

Hawai'i is by no means the only area where green turtles have been mistreated to the point of threatened survival. In fact, excessive harvesting of these big vegetarians has pretty much been the rule worldwide. The gradual decline of once plentiful stocks has, in recent years, caused many countries to tighten up laws and enforcement efforts. Under the U.S. Endangered Species Act, green turtles in Hawai'i became fully protected in late 1978 when they were designated as a Threatened Species. Between 1974 and 1978 noncommercial catching had been allowed (but not in the Leewards) under a state fishery regulation. However,



Anthony Souza and two friends pose with a green turtle which they accidentally hooked in the flipper while fishing at Ewa Beach. Tumors present on the eyes and neck were examined by the author before the turtle was tagged and released.

the official catch records showed that only about 20 turtles were legally taken each year during that four-year period. Since no compelling human need could be identified to justify the continuation of this catch, full protection was given to plug the remaining drain and allow the population to rebuild itself at the fastest rate possible.* Complete legal protection of this sort for a depleted turtle stock is clearly the ideal circumstance. Indeed, it is probably the only management strategy that offers some guarantee for success. But complete protection, for even a decade or so, is not always possible or reasonable for all areas of the world. For instance, on the isolated atolls called Tokelau, where I visited last year, the Polynesian inhabitants all live in small villages and lead a true subsistence lifestyle. As on many tropical Pacific islands, there is good evidence to show that the turtle population has gone downhill within recorded history. However, the nutritional and social needs of the native people living in these areas often make it necessary that some turtles be taken. Anyone who has ever visited a remote and resource-limited atoll will understand what I mean. The conservation of sea turtles in such cases has to be weighed against legitimate and compelling human needs. Of course, if too little attention is paid to stock conservation in this "balancing act," future generations of islanders could very well end up with no turtles at all.

Here in Hawai'i, green turtles have been in the news, again, because lately a number of speared animals have been found washed ashore in a half-dead condition. In my work as a biologist specializing in sea turtles, I have personally come across cases of broken-off spearheads imbedded in the backs of turtles. On one occasion I even had the unpleasant task of cutting out pieces of lead buckshot during an autopsy of a 200-pound turtle. While I am convinced that the number of people responsible for these blatant violations is very small, they nevertheless can do serious damage to the recovery efforts of the population. Publicity about these cases, such as appeared in the October issue of *Hawaii Fishing News*, will hopefully help to lessen future occurrences.

To help offset the recent bad news about turtle violations, I am happy to report a brighter side to the continuing saga of Hawai'i's green turtle. The good news is that at certain coastal sites on the main islands people are now starting to see more turtles. The increases seem to be mostly juveniles, as would be expected, but even so this is an encouraging sign. The most meaningful indication that the stock is recovering will, of course, be a long-time increase in the number of females showing up

... continued

* Hawai'i disagreed with listing the green turtle as a Threatened Species, but state law was later modified to provide full legal protection consistent with federal law.

George Balazs has been a research biologist with the Hawaii Institute of Marine Biology for the past 11 years. He is currently working under contract to the Honolulu Laboratory of the National Marine Fisheries Service.



Arnold Howard on the Big Island returning a small green turtle to the ocean after a tag was attached to the turtle's front flipper.

each year to nest at French Frigate Shoals. A systematic monitoring and tagging project started at the Shoals in 1973 has found considerable fluctuations in the number of turtles present from year to year. In the poorest year only about 95 nesting females were present, while in other years the numbers have ranged from approximately 125 to a high of 250 females. While no firm trends are yet apparent, the last two years (1981 and 1982) have held fairly constant at the upper end of this range. So there are indeed some small, but hopeful, signs that recovery is starting to occur.

Another side to the good news, and one that I am especially pleased to report, is the assistance and goodwill many of Hawaii's fishermen have displayed toward sea turtles and our efforts to learn more about them. This helping hand has included such important things as rescuing injured and sick turtles (such as in Capt. McKinney's case), releasing turtles accidentally caught in fishing gear, reporting tag recoveries and notable sightings of turtles, and telling others of the turtle's need for protection. These fishermen deserve a special word of thanks. To call attention to their good deeds, I would like to briefly describe several of the more recent cases that I am familiar with. There are undoubtedly many others that have not come to my attention, so I look forward to hearing from any readers that know of stories like the following:

While fishing from Ka'ena Point in October of 1981, Alfred and Angie Bacarro found a green turtle stranded in the rocks where it had been tossed up by waves. The turtle seemed to be in good condition except for a scraped hind flipper. After reading a tag on the turtle, the Bacarro's carried it back down to the ocean.

In March of 1981, George Hamamura hooked up with something big while fishing at night from O'ahu's north shore. Efforts to reel the "fish" in proved unsuccessful, and the line went slack. When the hook was examined, a turtle tag was found dangling from it. Records showed that the turtles had been double tagged (as most are) in June of 1979 while nesting at French Frigate Shoals. Two months after this unusual recovery was reported to me by Mr. Hamamura, I visited the Shoals to do more tagging. The same turtle was seen back there again nesting on the beach.

While trolling off Koko Head in April of 1981, Steve Kaiser, Lionel Aguiar and Chris Yamashita came across a green turtle floating at the surface caught in a scrap of foreign trawl net. The turtle was untangled and set free.

In September of 1980, Capt. Skip Naftel of the *EASY RIDER TOO* was fishing for lobsters near Kure Atoll in the Leewards when a leatherback got its front flipper tangled in the rope connecting the traps. At some risk to his own safety, Capt. Naftel jumped into the water and set the exhausted turtle free by cutting the line. If he had tried lifting the turtle aboard with the ship's winch, the turtle would undoubtedly have been injured because of its great weight.

While trolling off the Kona Coast in July of 1981, Capt. Peter Hoogs and Lincoln Ahlo found an adult female olive ridley stuck in a similar piece of trawl net. The turtle was brought aboard and placed in the baitwell where it was fed for a short time. Capt. Hoogs reported the incident by telephone, and I was able to tag the turtle before it was released. She was in good condition except for a few scrapes on her belly and being slightly underweight. This turtle may possibly be seen again many miles from Hawaii, since the nearest nesting beaches for olive ridleys are on the coast of Mexico.

In May of 1981, Anthony Souza was fishing with friends at Ewa Beach on a Saturday afternoon when a large male green turtle accidentally got hooked in the flipper. While trying to get the hook out, a number of tumorous growths were found on the eyes and neck. Feeling certain that someone would be interested in this disease, a telephone call was made to the Waikiki Aquarium, which in turn contacted me at home. I arrived a short time later and was able to examine, tag and photograph the turtle before it was released. Tumors of this sort sometimes show up on Hawaii's green turtles, but their cause is unknown in spite of investigations conducted by the Smithsonian Institution in Washington, D.C.

Ed Medieros, a trap-net fisherman on Moloka'i, regularly finds green turtles in the enclosure formed by his nets when they are set out overnight. The turtles are released unharmed, and records are kept of the numbers, sizes and sites of capture. When opportunities permit, the turtles get tagged by Bill Puleloa, a state aquatic biologist working on Moloka'i.

In November of 1981, fisherman Clayton Afelin found an olive ridley only nine inches long washed up on shore near Puko'o, Moloka'i. The turtle was entangled in a piece of line that had cut deeply into three of its flippers. Mr. Afelin notified Bill Puleloa, and the turtle was immediately sent to the Waikiki Aquarium for special care. The turtle is growing and doing well in a display tank where it can be seen by the public.

Rene Sylva of Paia, Maui, caught turtles for home use for many years, but voluntarily stopped when it became apparent that the numbers were declining. Mr. Sylva now speaks on behalf of sea turtle conservation whenever he has the opportunity.

Arnold Howard, a resident of Kau on the Big Island, also used to catch turtles to eat, but decided to use his skills and knowledge working with me on a research project. Mr. Howard and his wife, Jeanette, have helped turtles many times. On one occasion they even convinced someone to release a large hawksbill that had been caught alive and was being taken away in a pickup truck.

Over the years I have come across many other fishermen who have gone out of the way to help turtles or provide useful information. A complete list of the names and stories would be too lengthy for an article like this, but I do want to acknowledge the good works of a few more, including Adrian Akau, Robert and Dorothy Amaral, Scott Henderson, Max Imai, Ron McOmber, Koichi Masaki, Steve Miranda, Jerry Ray, Tom Stone, Jim Wheeler and Lester Zukeran.

On occasion I have given some thought to what reasons people may have for wanting to help Hawaii's sea turtles. These days it does seem like more and more people are showing a genuine concern. I suppose that two important factors would be the animal's truly amazing life history and its attractive, harmless nature when as seen when it is gracefully swimming in the wild or in an aquarium. Another reason for some, particularly those of Japanese ancestry, might be an appreciation for the Urashima Taro folklore in which a fisherman is rewarded with long life for having helped a sea turtle. Others may remember that in the Hawaiian culture the sea turtle was an *aumakua* to some families and was not to be abused. Still others may have had many good meals of turtle, or prospered financially in the past from selling turtle meat, and now want to pay back a small part of what the turtles gave to them. Whatever the reasons may be, I am convinced that efforts like this will make a real difference to the turtle's long-term survival here in Hawaii.

...George

"THE SOURCE"

- MARINE EXHAUST MANIFOLDS • CONVERSION KITS • THRU-HULL FITTINGS • SEA COCKS • STRUTS • BEARINGS • FRESHWATER COOLING KITS • OIL COOLERS • WATER HEATERS • ENGINE COOLING PUMPS AND PARTS • BILGE PUMPS • PRESSURE WATER SYSTEMS • WATER MAKERS • ANCHOR WINDLASSES • BOW THRUSTERS • BOW ROLLERS • FLEXIBLE WATER & FUEL TANKS • STEERING SYSTEMS • MUFFLERS • AC/DC ELECTRICAL DISTRIBUTION PANELS • ENGINE/GENERATOR PANELS • BATTERY CHARGERS • COMMERCIAL FISHING BOAT EQUIPMENT • SMOKE & FUME DETECTORS • TRIM TABS • STOVES • HEADS • FUEL FILTERS • RUBBER RAFTS • BATTERIES • MORSE CONTROLS • HYDROLOGICS: PINCH PULLERS, PUMPS, WINCHES, ETC.

HAWAII'S ONLY FACTORY AUTHORIZED DEALER

NEWLY-APPOINTED SUB DISTRIBUTOR



MARINE & INDUSTRIAL

MARINE & INDUSTRIAL

ALSO DISTRIBUTOR/DEALER FOR:

- PISCES • LEHMAN • WESTERBEKE • VOLVO • CHRYSLER (ISUZU) (FORD DIESEL) (PERKINS) (GAS & DIESEL) (GAS & DIESEL)

NCG HAWAII PHONE: AREA CODE (808) **848-0996**

Marine & Industrial Inc. (Located Near Big 88) 330 Sand Island Access Road/Bldg. 2, Bay 203/Honolulu, Hawaii 96819

"SPECIALIZING IN HARD-TO-FIND PARTS"

M. O. WELDING INC.

1924 DEMOCRAT 96819 PH. 847-0445 OR 737-3310

...Built in Hawaii, the MK II Fisherman is available with optional rod holders, underwater view port and live-bait well ...for fishing and diving the reefs.



OCEAN KAYAKS

MADE IN HAWAII PO BOX 438 KANEHOE HAWAII 96744 SOS 239 9803



HAWAII FISHING NEWS



Anthony Souza &
Friends With A
Green Turtle
Foul Hooked
In The
Flipper At
Ewa Beach

In This Issue!

- More On Slide-Bait Rigs
- Secret Weapons For Anglers
- Hook-Sharpening Methods
- World Spearfishing Record
- AFTMA— New Products '83
- Ultralight & The Challenge
- Fishermen Form Coalition
- Moon, Tides & More!



DECEMBER
1982

Volume 7, No. 11

\$2.50