

The reason for m

By Don Chapman
Advertiser Columnist

During the 33 years between fatal shark attacks in Hawaii, those who regularly spend time in the ocean developed a sort of blase attitude: Sure, there are a few sharks out there, but they're small and not really interested in me.

The death at Olowalu of Martha Morrell nearly six weeks ago changed that.

As a single tragic incident, what happened at Olowalu might be seen as a statistical anomaly. But that attack, by what is believed to one or more large tiger sharks, wasn't the only recent close encounter of the worst kind.

A week before, on the other side of Maui, Steve Park was fishing at Maliko Point when a large wave pulled him into the sea. A strong swimmer, he was last seen treading water. His body was never recovered, but when his clothes washed up later, experts said evidence suggested a large shark had taken a bite from Park's left hip and shoulder. They also said it was unlikely the same shark could be responsible for both attacks.

After the Olowalu attack, state officials launched a shark hunt at the attack site.

Although John Naughton of the National Marine Fisheries Service estimates there are 206 tiger sharks in Maui waters, the state ended its hunt when a single 13-foot, 1,000-pound tiger shark was caught.

Last month, surfer and model Buzzy Kerbox passed along a tip about two water buddies who spotted a 12-foot tiger shark off Kaneohe Marine Corps Air Station.

In June, the sighting of a seven-foot shark quickly emptied the water at Kailua Beach Park.

A 14-foot tiger was netted and killed at Waimea Bay on the North Shore. Another 14-footer was netted at Kualoa, then set free by fishermen.

A pregnant 10-foot tiger shark was trapped at low tide on the reef at Kualoa, where locals waded out and splashed water on the shark to keep it alive until high tide.

In April, a large shark attacked a surfer at Ewa.

The infamous Maili Shark, a 14-footer, "give or take a foot, on an arm" in the words of surfer-diver John Earle, attacked a surfer earlier this year.

It certainly seems as if there are more sharks out there than in the past.

The culprits at Olowalu and



The head of a 13-foot tiger shark state-sponsored hunt off Olowalu.

at Maliko Point are believed to be tiger sharks. But, says Leighton Taylor, the former director of the Waikiki Aquarium who has made a career of studying sharks, "great white sharks cannot be ruled out." Since 1892, 11 great whites have been positively identified in Hawaii. The smallest was a nine-footer, the largest at least a 15-footer.

Great whites remain very rare and tigers are the most common large shark in Hawaiian waters.

"I think the tiger shark population may be building up in Hawaii," says Jack Randall, senior ichthyologist at Bishop Museum.

"Quantitatively, it's hard to measure," says Taylor. "But there have been more sightings... It only takes a handful of big sharks such as great whites and tigers to make an impact."

If, as many suspect, there are more large sharks, the question is why?

Marine artist Robert Lyn Nelson and wife Uilani are among those who wonder if there are more sharks because there are more whales. Just-born calves and old or dying whales would provide the most likely targets.

"I've only seen sharks in the vicinity of whales three times in 15 years," says Paul Forestall, director of research for the Pacific Whale Foundation. "But just because you don't see them, it doesn't mean they're not there. I do know that last season we had wall-to-wall whales."

"I'd be real surprised if there

one shark sightings more sharks

ore shark sightings? More sharks



Advertiser photo by Edwin Tanji

ark sits in a large bucket after a u, Maui, last year.

is any connection between tiger sharks and humpback whales," says Bruce Carlson, aquarium director. "But I guess there's a possibility that great whites could follow the humpbacks as they migrate from Alaska."

Green sea turtles, unlike whales, are known to be a fa-

vorite treat of tiger sharks. "Both green sea turtles and hawksbill turtles are coming back in greater numbers, even at Waikiki," says Arnold Suzumoto of the Bishop Museum ichthyology department.

"Why not blame it on more lobsters, too? The tiger they caught at Olowalu had a lobster in its stomach," says George Balazs, National Marine Fisheries Service zoologist and head of its marine turtle research program, as well as the guy who has recorded every known shark attack in Hawaii.

"As I've tried to explain, as a scientist, sharks are not 'attracted in to shore.' They are a reef species. They spend the day in deep water and then come to the reef at night to feed on a wide variety of things."

Scientists have also discussed the theory, raised by environmentalists, that driftnets and long-line fishing have depleted deepwater fishing supplies, thus driving sharks closer to shore. But the feeding pattern described by Balazs discounts that theory, as does Taylor's study of a 14-foot tiger that he caught, tagged with a sonic beeper, released and tracked.

What the experts see is that the tiger shark population has finally rebounded from a state-

sponsored shark-fishing program launched after Billy Weaver was killed by a tiger while surfing off Lanikai in 1958.

"I've been diving since 1957," says Earle, a Hawaiian Airlines captain, who often accompanies Randall on shark research expeditions.

"In the old days, you'd see a lot of innocuous types of sharks, like the sandbar shark. You'd see them on every dive. After Billy Weaver, a very intensive state fishing program knocked the tiger shark population way down. There was a blooming of small shark species that lasted into the 1970s. Since then, the tiger sharks, have slowly bounced back. The first thing they did was clean out the smaller sharks. You almost never see a sandbar shark now. But what's next?"

UH Professor Albert Tester led the tiger shark hunting program after Billy Weaver's death and averaged three sharks caught per 100 hooks set. Within a few years, he was catching one shark per 100 hooks set. By 1976, the program was disbanded.

Balazs says two factors contributed to the growth of the tiger shark population over the past 16 years:

"First, they haven't been

fished. That amounts to de facto protection. Second, once they get to 10 or 12 feet, they have no enemies."

Taylor says because tigers give birth to live young, and only a few at a time, and because they take about 10 years to mature and reproduce, "if you exert heavy fishing pressure, it's possible to reduce the numbers of the overall population dramatically in a fairly short period."

"I'm certain that sharks and people can co-habitate in most places," says Earle. "But I'm an advocate of controlled fishing of some areas, places like Olowalu and Maili, to control the population."

"We're more environmentally sensitive than we used to be," says Linda McCreary, spokeswoman for the state Department of Land and Natural Resources. "We won't just go wipe out a whole species. I don't think there is much support for the way we did it in the past."

DLNR Director William Paty says the state will continue to deal with attacks on a case-by-case basis. But he said: "Personally, I live on the North Shore and try to swim several times a week. And I'm looking around a little more than I used to."

Olowalu shark attack has swimmers jumpy in South Maui

SHARK from page 1 (Olowalu)," said Kihei resident Felice Leser. Members of the group said they were staying closer to shore, and were keeping alert. They had discussed an orderly exit from the water in case any sharks were spotted, but otherwise said the attack wouldn't deter them from their daily dip.

The attack that took the life of Olowalu resident Martha Morell was characterized as the rarest of events by a member of the Maui Fire Department rescue team that responded to the tragedy. And one marine expert familiar with shark attacks here said authorities are correct in trying to eliminate the shark responsible for the killing.

A large shark, thought to be a tiger, attacked Morell Nov. 26, killing her, an event reportedly seen by at least two witnesses. Capt. Conrad Ventura of the Fire Department rescue team called any shark attack here "rare."

"And a fatal attack is very rare. And even rarer than that is a fatal attack that has an eyewitness," Ventura said, a Fire Department

veteran of almost 20 years who's been around the ocean all his life.

Morell was swimming in waters off her home in Olowalu with a companion when a neighbor heard Morell's friend call for help. The neighbor said he saw the attack and later saw the shark in the water after he launched a boat to help recover Morell's body. Morell's swimming companion not only witnessed the attack, but suffered abrasions trying to fend it off, and was able to return to shore unhurt.

George Balazs, a marine biologist/zoologist with the National Marine Fisheries who keeps records of shark incidents in Hawaii, would only agree with Ventura's description of a fatal shark attack that was witnessed as being rare.

"Most of the time we don't know exactly what happened to the victim, and can only guess," he said.

Balazs said he is first and foremost a zoologist and marine biologist, and does not consider himself an expert on shark behavior. But he said there is evidence to suggest that marine predators can be territorial, and dwell

or return to where it has hunted successfully in the past.

He is familiar with the Olowalu area where the attack took place, and said he would not personally be interested in entering the water there for a good while, and suggested that authorities should seriously consider eliminating the shark responsible for the attack. Subsequent to that suggestion, authorities announced they were going shark hunting off Olowalu.

It was the first fatal shark attack on a swimmer/recreational ocean user recorded off Maui since 1828, though three fatalities involving sharks have been recorded since the first one recorded 164 years ago.

According to statistics Balazs has published, 16 injuries or deaths involving sharks have been recorded off Maui from 1828 to 1989, until Morell's death last week. In 1828 off Lahaina, in an event that was also witnessed, a man riding the surf was killed by a shark.

In a strict sense, he was the last swimmer/recreational ocean user fatally attacked off Maui until Morell. The other fatalities were a woman who was swept out to sea in 1909, whose body appeared to be devoured by a shark; a scuba diver who passed out at 180 feet diving for coral and whose body was devoured by sharks; and Avery Goo off of Waihee in 1988, who was lost at sea when the boat he was in capsized. Pieces of human internal organs believed to be from Goo were found later along the shoreline.

The only other fatal shark incident off Maui in Balazs' figures involved the contents of a shark's stomach caught off of Maalaea around 1943, which included "soldier's shorts and an arm."

Three shark attacks off Maui recorded from 1980 to 1989 all involved either boogie, sail or surf board riders, and all were non-fatal.

Maui, according to Balazs' records, was in 1976 off Kamaole Beach Park I, when a swimmer was bitten on the leg and foot by a shark.

In 1973, a swimmer was bitten on the leg off Kalama Beach, and a spearfisher received severe lacerations off Makena in 1960.

From 1779 until 1989, there were 36 known human fatalities involving sharks throughout Hawaii, and 83 incidents overall.

The figures showing 83 shark incidents, including 36 fatalities, break down along demographic lines, with Oahu leading in recorded incidents, Maui and the Big Island tied for second, followed by Kauai and then Molokai.

There has been a definite increase in shark incidents off Hawaii in the past 15 years or so, Balazs' figures show. Besides an increase of the human population in Hawaii, Balazs said he suspects part of the reason is the decline and virtual disappearance of commercial fishing for near-shore species like tiger sharks here.

He said that industry has declined since laws requiring all contents of food be named, including fish cakes, a principal ingredient of which used to be shark. Balazs also said that sharks can be overfished relatively quickly.

In the absence of fishing, he maintains, shark populations - and the size of sharks in the populations - can be expected to grow.

"And the big sharks have to eat," he said.

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Environmental Update

List of shark attacks here shows they are infrequent

Most of Hawaii's wildlife is harmless, whether colorful forest birds or reef fishes, but one of the fishes, while dangerous, has a reputation even worse than the truth.

It's the shark, that ancient family of ocean scavengers.

With the latest version of the shark movie, "Jaws," in the movie houses, it's timely to look at the state of shark attacks in Hawaii.

George H. Balazs of the National Marine Fisheries Service in Honolulu has compiled an annotated list of Hawaii shark attacks, dating back to 1779.

There is inescapable human fear and fascination with sharks. The "Jaws" movie series thrives on these feelings. And while the descriptions of individual attacks in real life are frightening, the broader perspective shows they don't happen with nearly the frequency one might expect.

The Balazs list was compiled from old newspaper records, magazines, books, personal recollections and other accounts. It may not be complete, particularly for earlier years, but it is probably the best information available.

Of the 70 cases Balazs was able to document since 1900, 30 have been fatalities.

Most Hawaii shark attack victims, while they may suffer serious injuries, survive the attacks. There are numerous cases of people bitten on the arm or leg who then were able to get to shore and get medical attention.

In the more complete recent data, Balazs said there have been 34 documented cases of shark attacks since 1960, or 1.26 per year. Thirteen of the attacks were fatal, or about one every two years.

Balazs does not distinguish between victims actually killed in the shark attack and those drowning or other accident victims whose bodies were subject to shark predation after death. Thus, the actual number of fatalities caused by sharks may be somewhat lower.

The State of Hawaii Data Book provides some facts with which to make comparisons with the Balazs information.

During the decade 1975-84, there were 15 shark attacks in Hawaii, six of them listed as fatal. During the same decade, 1,620 people died in traffic accidents.

Using that information, you can make the claim that traffic is 270 times more dangerous than sharks to Hawaii residents.



Jan TenBruggencate
Kauai Bureau

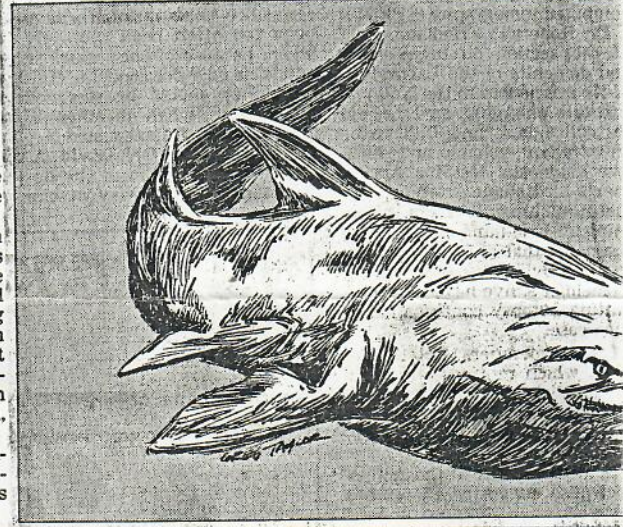
During that decade, more people died of AIDS than of sharks, more died of hepatitis than from sharks and more died of tuberculosis than from sharks.

The first citation by Balazs is a 1779 case involving a surfer named Nuuanupaahu at Malii

on Hawaii. A shark bite gave him a gash on his buttocks. He died at Pololu.

There are few reports from the 1800s. Most of the cases from the early 1900s involve fishermen. A young man killed at Kalihi, Oahu, while crabbing in 1902. A man losing an arm while pulling fish out of a net at Kihei, Maui, in 1907. A man pulled under while gathering fish stunned by dynamite at Mana, Kauai, in 1908.

In recent years, surfers, sailboarders, divers and recreational swimmers have joined anglers and opihii pickers as victims.



Shark perils divers trying to rescue body

By Christopher Neil
Advertiser Staff Writer

Fire Department divers yesterday found the body of a scuba diver reported missing off Kahe Point but could only watch as a huge shark attacked the corpse.

The diver, Ray Mehl of Kurukula Street in Waipahu, was reported missing Saturday night by friends who said they surfaced about 400 yards away from the Hawaiian Electric Co. power plant outflow and then lost sight of their 32-year-old companion. Fire rescue team searchers started looking for the missing man at about 6 p.m. Saturday but gave up at 10 p.m.

The firefighters started searching again at about 9 yesterday morning. Two Nanakuli firefighters began snorkeling where the missing scuba diver was last seen. The fire rescue team sent out boats and a helicopter.

Firefighters Albert Fernandez and Walter Falconer, swimming in water made murky by the runoff from the mountains during the recent rains, first found a speargun — cocked but unfired — and a scuba tank. Then they saw the diver's body, wedged between some rocks.

Fernandez said he was diving down to get the body, "but then I saw this shark come up and it was big — maybe 10 or 15 feet — and big and thick so we went back up again.

"It was going around us and under us and just watching," he said.

Falconer and Fernandez got back-to-back for protection in the murky water. Falconer held the loaded speargun at the ready while Fernandez began waving a rescue buoy at the rescue squad and the helicopter on the shore. Then the helicopter took off and hovered above the water where the two firefighters were keeping a wary eye on the shark.

Acting Capt. Aaron Young of Rescue Squad II dropped from the helicopter into the water next to Fernandez and Falconer.

"Imagine how I felt," Young said. "I didn't know what was going on down there. I never thought I would be afraid of a shark, but when I saw this guy I walked on water."

Young decided it was unsafe to remain in the water as long as the shark was there and had the helicopter come and pick them up.

Young noticed about eight people in a scuba diving class closer to shore and warned them to get out of the water. He also warned two divers by the HECO outflow.

After making sure all the swimmers were out of the water, Young and a rescue squad boat returned to the area where the shark was and dropped a buoy.

They watched as the shark thrashed around in the water.

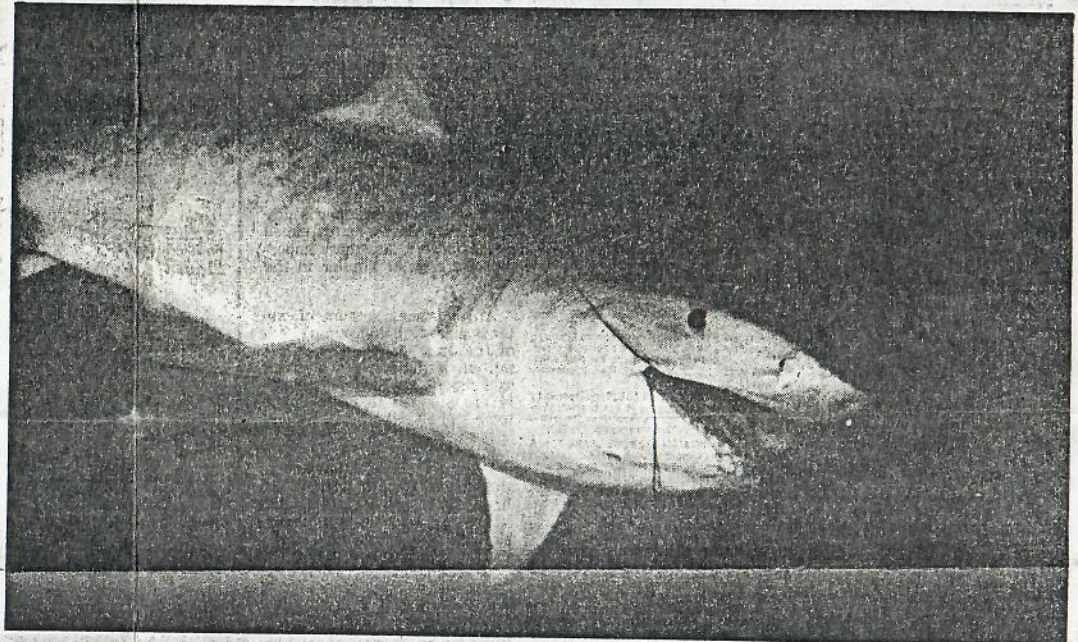
When the shark came to the surface, Young and the others headed back to shore to get a police sharpshooter stationed there. But when they returned, the shark was gone. It was 11:15, almost two hours after Fernandez and Falconer first sighted the body in the water.

What was left of the diver's body were finally brought to shore. "There is no way we could find out if he got into trouble and he died or if he was initially attacked by sharks," Young said.

Young added that the diver's friends have positively identified the dive equipment retrieved by Falconer and Fernandez.

It was uncertain what kind of shark it was that attacked the diver's body. Young said tiger shark sightings are common in the area, perhaps because of the outflow from the HECO plant, but he saw none of the distinctive stripes that tiger sharks have.

"He was big, grey and had a



This photo of a tiger shark was taken a few years ago.

Advertiser file photo

white underbelly, that's all I know. He was huge; I couldn't believe how big he was."

According to Lt. Teene Froiseth of the Department of Parks and Recreation's Water Safety Division, the recent rains may be the cause of several recent shark sightings.

"When it rains all the dead animals and mosquito larvae from the mountains are washed into the ocean," Froiseth said.

Froiseth said the larvae attract smaller fish and the smaller fish attract larger ones. "The whole food chain moves in," he said.

Additionally, the rains flood canals and carry fresh water fish to the ocean, where they die. The dead fish also attract scavengers such as sharks, he said.

The Waianae Army Recreation Center closed its beach at Pokai Bay on Oct. 6, 7 and 8 because of shark sightings, an Army spokeswoman said.

And Froiseth said a camper at Nanakuli caught a 6-foot sand shark in a net Friday. Other sharks have been spotted at Nanakuli Beach Park in the past week, he added.

Shark attacks on the rise in Hawaii, expert says

By Barbara Hastings
Advertiser Science Writer

Marine biologist George Balazs says shark attacks in the Hawaiian Islands have been on the increase.

Balazs, with the federal National Oceanic and Atmospheric Administration's fisheries service, said there have been "an extraordinary number of cases in the past couple of years. I don't think it's (just) better reporting."

There have been six attacks this year alone, he said, three on Kauai, and one each on Maui, Molokai and Oahu.

During the 1980s, Balazs said, there have been 22 shark attacks in Hawaii waters. Counting this attack, Balazs said, eight people have died.

Marine researchers list any attack on a human, Balazs said

— those who may have drowned first and then were attacked by the shark and those who died directly of shark attacks.

During the decade of the 1970s, Balazs said, there were 11 shark attacks and three people died.

Balazs has gathered a list of 78 shark attacks since 1900.

The 1980s decade holds the record at 22. The 1950s were second with 14 attacks, he said.

In most cases, it wasn't clear what type of shark was responsible. The great white shark was implicated in some, he said.

Great white sharks have been spotted here now and again since the turn of the century, according to reports, but they do not make Hawaiian waters their home.

The tiger shark is the biggest local shark resident. It's also one of the most prevalent in Hawaii waters. Balazs said they are abundant in waters just past the dropoff — just past the wave action where the water gets deep.

Even though there are lots of them, Balazs said, they are rarely seen by divers. "That's probably because they mainly feed at night or at transition times — sunset and sunrise."

Bruce Carlson of the Waikiki Aquarium said they tend to come closer to shore at night.

Balazs said his colleague, John Naughton of NOAA Fisheries, did research on shark habits and found that when there's a lot of fresh water and debris running into the ocean following big downpours on the islands, there seem to be more tiger sharks around.