

SHARKS OF HAWAII

THEIR BIOLOGY AND CULTURAL SIGNIFICANCE



LEIGHTON TAYLOR

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Leighton Taylor

Paintings by

Michael Cole

Comprehensive Register of Shark Attacks by

George H. Balazs



University of Hawaii Press
Honolulu

Cover Picture: *Galeocerdo cuvier* (tiger shark)

Tigers have a reputation as scavengers but their natural diet includes a wide range of living creatures: green sea turtles, monk seals, juvenile albatrosses, reef fishes, fishes, porpoises, octopuses, squids, lobsters, crabs and other sharks.

The scene in Michael Cole's painting is based on my observations of tiger sharks feeding on lobsters in the northwestern Hawaiian Islands and on the frequent occurrence of lobster carapaces in tiger shark stomach contents. The blunt flattened snout may be an adaptation for feeding in crevices and overhung caves. Divers collecting lobsters from reefs need to be especially careful.

Cover Insert Picture: This fist weapon was collected on the expeditions of Captain James Cook. The teeth are probably from a gray reef shark.

Page ii: *Megachasma pelagios* (megamouth shark)

This view of a megamouth shark suggests a way it may use its huge mouth to take in animals of the deep scattering layer (DSL) community. Michael Cole has painted a muted glow to the inner surface of the mouth. Perhaps this silvery covering reflects the dim light available and attracts prey animals. It is speculated that the lining of the mouth might have bioluminescent organs, but so far this has not been proven. Like Megamouth I, the shark in the painting has scars from encounters with a cookiecutter shark. The black spots on the lower jaws and chest and the black leading edges of the pectoral fins are characteristic of megamouths.

Page vi: *Carcharhinus melanopterus* (blacktip reef shark)

Blacktip reef sharks are common in the shallow, sandy lagoons of Pacific islands and atolls. Adults are found outside the lagoon along the coral reef drop-offs, but pregnant females enter shallow water to pup. The foot-long juveniles can be caught by hand in shallow lagoons by nimble waders. In the high islands of Hawai'i, blacktip reef sharks are now relatively rare compared with their former abundance. They can be seen reliably in springtime on the reefs east of Lāna'i; the area off Kawaihae, Hawai'i; the sandbars of Kāne'ohe Bay, the south shore and west end of Moloka'i; and near Olowalu, Maui. Juveniles have been reported to attack humans by biting them on the ankles or shins (see Randall and Helfman, 1973).

Published in North America by
University of Hawaii Press
2840 Kolowalu Street
Honolulu, Hawaii 96822

Printed in Singapore

Simultaneously published in Singapore by
© 1993 Times Editions
An imprint of Times International Pte Ltd
Times Centre, 1 New Industrial Road
Singapore 1953

"Register of Shark Attacks in Hawai'i"
© 1993 George H. Balazs and National Marine Fisheries Service

Library of Congress Cataloging-in-Publication Data

Taylor, L. R. (Leighton R.)

Sharks of Hawai'i: their biology and cultural significance / Leighton Taylor.

p. cm.

Includes bibliographical references (p. 126) and index.

ISBN 0-8248-1562-9: \$ 19.95

1. Sharks--Hawaii. 2. Sharks--Hawaii--Folklore 3. Folklore--Hawaii.

4. Hawaiians--Folklore. II. Title.

QL638.8.T38 1993

597'.31'09969--dc20

93-10424

CIP

Unless otherwise noted, all photographs are by the author.

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As significant as the great white shark must have been in Hawaiian culture, the more abundant and equally large tiger shark may have been more important. Tiger shark teeth are certainly more common in tools and weapons: in knives, fist weapons, heavy clubs, and light wooden scepters. Their semi-circular, obliquely notched shape is unique and distinctively different from that of any other species. Just as the tooth shape differs from that of great white sharks, so do the tiger shark's behavior and habits.

Tigers are famous for their indiscriminate palate. Adults take floating seabirds and sleeping turtles and poke their blunt noses into caves to pull out lobsters. Modern tigers are renowned for eating garbage. Reportedly, tigers have been caught with trash can lids in their stomachs (for an example see the Register of Shark Attacks, case 18).

Presumably, the tiger sharks in Kamehameha's day were no different. It seems unlikely that such an animal (even a large individual) would have been imbued with the same mystical power and strength as that attributed to the great white shark.

Various interpreters and repeaters of Hawaiian legends have called the large dangerous sharks of Hawai'i

The head of this Hawaiian hula drum is made from the dried skin of a tiger shark.



Hawaiian monk seals frequent the same shallow reefs as tiger sharks—also hunting for lobsters.

niuhi. However, it is seldom clear which large species is meant, the tiger or the great white. Frequently, I think, the two species have been confused in stories. But, based on the differences in the two animals, we can make some educated guesses about which species is which.

For example, Kamakau (1976, pp. 87–88) told of a special method of fishing for *niuhi*:

A fisherman sailed far out on the ocean until the land looked level with the sea, that was the place for shark fishing. When all was ready, the prow of the canoe was turned into the current so that the upswell of the current would be behind the canoe. The net containing the decomposed pig mixed with pebbles and broken kukui nut shells was tied to the starboard side of the canoe at the forward boom. Then the net was splashed into the sea and poked with a stick until the grease ran through the pebbles and shells. A shark would scent the grease, his dorsal fin would break through the surface of the sea, and it would snap its teeth close to the canoe. The large sharks were the *niuhi*; they could be tamed like pet pigs and be tickled and patted on the head. The fisherman would pat the shark on the head until it became used to being touched. Then he rested his



B. PATNOI, BISHOP MUSEUM



B. PATNOI, BISHOP MUSEUM

chin on the head of the shark and slipped a noose over its head with his hands, turning his palms away from the shark lest it see their whiteness and turn and bite them. When the snare reached the gills, the fisherman eased it downward to the center of the body and tightened the noose. If it were a big shark there would be a furious tugging and battling.

It seems likely that the large *niuhi* described in this account is a tiger shark rather than the more violent great white shark. Large tigers are known to be quite calm and can be handled relatively easily. In fact, thirty years ago in Honolulu, an enterprising fisherman took advantage of the docility of tigers and opened a "sharkquarium," called Marineland, at Kewalo Basin.

Here, a curious public paid to see young men riding on the backs of large tiger sharks. This apparently was a grand tradition of O'ahu. In 1870, Kamakau reported that men on O'ahu were famous for catching sharks by hand. In 1876, he colorfully reported (with an interesting analogy to the imported saddles used by contemporary *paniolo*): "To the native son, the shark was a horse to be bridled, its fins serving as the pommel of a Mexican saddle. I have seen men skilled in herding sharks riding a shark like a horse, turning the shark to this side and that until carried to shore where the shark died" (as quoted in Buck, 1964, p. 289).

Although the "sharkquarium" is gone, the exhibit tanks remain and are now used by the University of Hawaii to house bottlenose porpoises for

Above: The Elgin Kalaniopu'u cloak of red and yellow feathers.

Left: The Kiwala'o cape of red and yellow feathers.

research in cetacean communication. To be accurate, I must add that Marine-land also featured, for almost two days, a captive great white shark. To my knowledge this was the first great white shark ever to be on public display. Despite subsequent efforts by major aquariums, no great white shark has been kept alive. Like the Honolulu specimen, all have reached captivity suffering eventually fatal effects

of an intense struggle during capture.

Another possible case of tiger sharks mistaken for great white sharks appears in Armine von Tempski's (1940) charming memoir of her girlhood on a large Maui ranch early in this century. She described a cattle drive from the slopes of Haleakalā to Mākena Beach. Here the cattle were pulled into the sea and dragged to a waiting ship to be hauled aboard and shipped to Honolulu. She described her father's warning about tiger sharks which appeared only infrequently but viciously attacked the floundering cattle. The infrequent occurrence and the vicious attack are far more suggestive of a great white shark.

An individual tiger shark may range over a wide area but is usually predictably and regularly present for long periods in a given area. In a study conducted at French Frigate Shoals in 1977, I and other University of Hawaii biologists tracked a large tiger shark that we had caught and tagged with a

It is very possible that the elaborate leg tattoo was associated with the strength and power of the niuhi, the great white shark whose distinctive triangular teeth were highly valued by the ancient Hawaiians.



PHOTO PROVIDED BY BISHOP MUSEUM



Above: These teeth are part of a series of 21 tiger shark teeth rimming a 3-foot (90 cm) long wooden war-club. Note the careful lashing to the wood. The sennit lashing is in turn covered by what appears to be strips of whale baleen. These were probably installed to protect the lashing from being cut by teeth from another club. Several of the teeth on this war-club are broken, perhaps in a combat episode centuries ago.



Left: This wooden-handled knife tipped by a large great white tooth was collected on Captain James Cook's expedition to Hawai'i. It reflects the kinds of tools made by Hawaiians before Western contact. Later versions included metal blades in the same shape as the shark tooth. Ironically, metal tends to dull far sooner than the edges of a shark tooth. The tooth measures 1.5 inches wide by 1.75 inches high (3.7 cm x 4.5 cm).



This curved fist club is tipped with great white shark teeth from a shark at least 12 feet long (366 cm). Teeth measure 1.5 inches (3.7 cm) high. A blow struck by a hand holding this weapon could create a wound as serious as that inflicted by the bite of a living shark.

sonic transmitter. Using hydrophones we could follow it by boat. Although we listened for only two days, the shark appeared to have a repeated patrol pattern around a specific area.

The story of Kapa'aheo, the Kohala shark god, seems almost inarguably to be a great white shark. Heloke Mookini has related it to scholars at the Bishop Museum (from Bishop Museum archives):

Long ago young girls enjoyed swimming in a lovely cove in Kohala on the Big Island. Often a swimmer would disappear and never be seen again. The people were very afraid and wanted to learn what had happened to the girls. A fisherman noticed that when a swimmer disappeared, a mysterious stranger named Kapa'aheo could be seen sitting on the shore nearby. This fisherman then got all of the other fishermen together and they were on hand when the girls went swimming again. As before, the stranger was sitting on the rocks overlooking the cove. When he disappeared the leader of the fishermen ordered the others to dive into the water and form a protective circle around the girls. The shark swam toward the group and a huge fight began. Many

times the shark was wounded by the spears of the fishermen. Finally the shark swam away. When the men were back on shore, they found the stranger dying from many wounds that looked like they were made by fishing spears. When the man died from the wounds, he was transformed into the stone found near the edge of the cliff by the ocean.

This stone, a 9-foot (275 cm) reclining column of pāhoehoe lava, was moved from near the 'Upolu Airport to Honolulu and eventually to the Bishop Museum (see p. 24). It now reclines in a lovely peaceful garden—but touch it, gaze upon its conical, pointed nose, stroke its massive length—I dare you not to hear the sharp scream of a young Hawaiian girl and see the crescent tail of a great white shark slash the ocean's surface.

Shark research can be a messy business and a source of data. Here a researcher removes two turtles and remnants of a smaller shark from the stomach of a 15-foot (458 cm) tiger shark.



Above: Hawaiian spiny lobsters are a significant part of the diet of Hawaiian tiger sharks.

Right: Fledging black-footed albatross sometimes crash in the water when they are learning to fly. Before they can swim back to the landing-strip on the beach, they are devoured by tiger sharks.

Below: The Hawaiian monk seal is rarely seen around the high islands. The population base of this rare seal is centered in the low lying islands of the northwestern part of the chain. The waters abound with tiger sharks, its major predator.



Hawaiian Proverbs and Sayings That Mention Sharks

‘Ōlelo No‘eau: Hawaiian Proverbs and Poetical Sayings
by Mary Kawena Pukui
(Honolulu: Bishop Museum Press, 1983)

‘Ai a manō, ‘a‘ohe nānā i kumu pali

When the shark (manō) eats, he never troubles to look toward the foot of the cliff. (Said of a person who eats voraciously with no thought of who provided the food, shows no appreciation for what has been done for him, nor has a care for the morrow.)

E ao o pau po‘o, pau hi‘u ia manō

Be careful lest you go head and tail into the shark [manō]. (A warning to be on one’s guard. Nanaue, of Waipi‘o, Hawai‘i, had two forms—that of a man and that of a shark. As people passed his farm to go to the beach, he would utter his warning. After they had passed, he would run to the river, change into a shark, and swim under the water to the sea where he would catch and eat those he had warned. No one knew that it was Nanaue who was eating the people until someone pulled off the shoulder covering he always wore and discovered a shark’s mouth between his shoulder blades. After he was put to death the people were safe again.)

He manō holo ‘āina ke ali‘i

The chief is a shark [manō] that travels on land. (The chief, like a shark, is not to be tampered with.)

He niuhi ‘ai holopapa o ka moku

The niuhi shark that devours all on the island. (A powerful warrior. The *niuhi* shark was dreaded because of its ferociousness. It was believed that a chief or warrior who captured this vicious denizen of the deep would acquire something of its nature.)

Ho‘ahewa na niuhi ia Ka‘ahupāhau

The man-eating sharks [niuhi] blamed Ka‘ahupāhau. (Evildoers blame the person who safeguards the rights of others. Ka‘ahupāhau was the guardian shark goddess of Pu‘uloa [Pearl Harbor] who drove out or destroyed all the man-eating sharks.)

Kahu i ka lae o ka manō, he ‘ale ka wahie

Kindle a fire on the forehead of a shark [manō] with waves for

fuel. (Said when food in the *imu* is not cooked because of a lack of firewood. A criticism of the hosts’ half-cooked food.)

Ke one kuilima laula o ‘Ewa

The sand on which there was a linking of arms on the breadth of ‘Ewa. (The chiefs of Waikīkī and Waikele were brothers. The former wished to destroy the latter and laid his plot. He went fishing and caught a large *niuhi*, whose skin he stretched over a framework. Then he sent a messenger to ask his brother if he would keep a fish for him. Having gained his consent, the chief left Waikīkī, hidden with his best warriors in the “fish.” Other warriors joined them along the way until there was a large army. They surrounded the residence of the chief of Waikele and linked arms to form a wall, while the Waikīkī warriors poured out of the “fish” and destroyed those of Waikele.)

Ke pau ka moa, kākā i ka nuku; ke pau ka ‘iole, ahu kūkae; ke pau ka man, lanaō i ke kai

When a chicken finishes [eating] he cleans his beak; when a rat finishes, he leaves a heap of excreta; when a shark [manō] finishes, he rises to the surface of the sea. (A description of the table manners of people. Some are clean like the chicken; others are unclean, and careless, like the rat; and still others, like the shark, loll around without offering to help.)

Pua ka wiliwili nanahu ka manō; pua ka wahine u‘i nanahu ke kānāwai

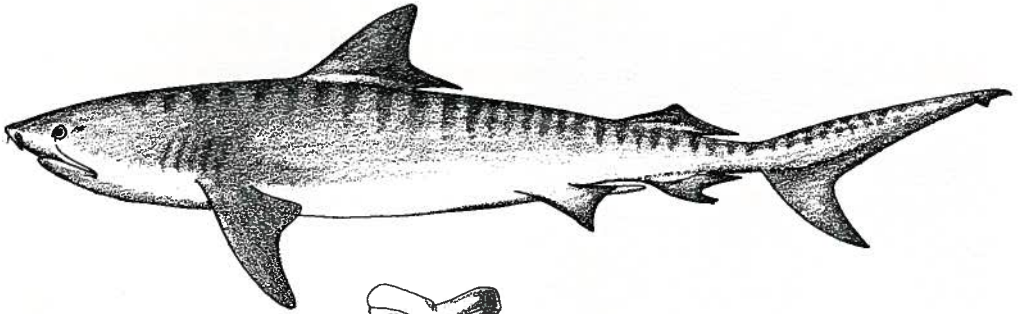
When the wiliwili tree blooms, the sharks [manō] bite; when a pretty woman blossoms, the law bites. (A beautiful woman attracts young men—sharks—who become fierce rivals over her. The law prevents the rivalry from getting out of hand; it can “bite.” It is said that when the *wiliwili* trees are in bloom the sharks bite, because it is their mating season.)

Uliuli kai holo ka manō

Where the sea is dark, sharks [manō] swim. (Sharks are found in the deep sea. Also applied to men out seeking the society of the opposite sex.)

Wela ke kai o Ho‘ohila

Warm is the sea of Ho‘ohila. (Praise for a fearless warrior, or a warning that danger is near. It is said that the presence of a shark is indicated by the warmth of the sea.)



Species: *Galeocerdo cuvier*

Common name: tiger shark

Hawaiian name: *niuhi*

Size: maximum reported length 550 cm (18 feet); males mature at 226–290 cm, females at 250–350 cm; size at birth 51–76 cm

Guide to identification:

Tiger sharks are almost unmistakable. Distinctive characteristics include blunt head with straight margin, small pectoral fins, and tigerlike markings. These are more obvious in juveniles and can be difficult to see in adults. Body color ranges from brownish to bluish gray, with darker stripes overlaying the basic color. Tooth shape is unique.

Young Brothers (founders of the inter-island freight company) often took paying customers offshore to fish for sharks, using dead Honolulu wagon horses for bait.



PHOTO PROVIDED BY BISHOP MUSEUM

Notes on biology:

The tiger shark's diet is comprised of various slow-swimming fishes (e.g., puffers), octopuses, crabs, sharks, rays, porpoises, seabirds, turtles, lobsters, garbage, and an array of other items. Because meals like turtles and lobsters take longer to digest than soft-bodied fishes, it is difficult to measure from stomach contents the relative abundance of food types eaten by an individual shark. Tiger sharks are believed to periodically evert their stomachs, in order to get rid of indigestible matter (such as turtle scutes) too large to defecate. Records of the stomach contents of tigers likely over-represent the dietary importance of turtles because the indigestible shell parts may be retained for weeks without being regurgitated. In contrast, soft-bodied prey (e.g., fishes, octopuses) are quickly digested and leave little or no signs of their presence. Tiger sharks are found throughout the world's tropics. These are probably the most dangerous sharks in tropical waters. Although they are big and dangerous, they can tire quickly and become fairly docile.

Shark Attacks in Hawai'i

George H. Balazs, National Marine Fisheries Service, Honolulu Laboratory

(Note by Leighton Taylor: I am particularly grateful that George Balazs has allowed me to include his excellent and exhaustive case by case compilation of shark attacks in Hawai'i. George has combined scholarship with his humane, ethical, and friendly personality both to search archives and to interview victims and their families. By doing so he has assembled a reliable and useful compendium of information about human relationships with sharks in Hawai'i.)

Shark interactions with humans have at least three possible causes. The differences among them need to be considered when reviewing these records. Some attacks (few in proportion to the total) are motivated by feeding behavior. Tiger sharks eat a wide variety of animals and especially tend to strike floating objects. Occasionally they mistake a human swimmer or surfer for their normal prey. Great white sharks eat seals, sea

lions, porpoises, and other mammals. They make mistakes too.

Many sharks are opportunistic eaters and will salvage meals from animals dead from other causes. Usually the source of these meals is a dead marine animal—a whale carcass, perhaps. Sometimes the source of these meals is a drowned human.

The most probable cause of a shark attacking a human is behavioral and not hunger. Many inshore sharks appear to be territorial, at least about their personal space if not an actual area of the reef (although this is possible too). When a shark is threatened, it reacts aggressively, sometimes by striking a warning posture, sometimes by suddenly biting the intruder. Such behavior is similar to that of a watchdog biting a mail carrier. The dog is not trying to eat the delivery person; neither is the shark trying to eat the swimmer or diver.

Of course, there is another circumstance in which people are injured by sharks. When a person hand-feeds a shark or interferes with its natural behavior by pulling its tail, spearing it, or some other form of molestation, biting can result. This is called "asking for it," and we warn against it.

The following list, current through December 1992, has appeared in several earlier publications starting in 1981 (see Balazs and Kam 1981, 1983; Balazs 1987, 1992). Prior to 1981 there were no comprehensive lists for shark attacks

Carcharodon carcharias (great white shark)
This speculative view shows a great white shark about to be hooked by a Hawaiian fisherman. The painting is based on several items of indirect evidence. Certainly Hawaiians made good use of great white sharks, as evidenced by tools and weapons collected on Captain Cook's visits to Hawai'i.

The ancient Hawaiians also crafted large fishhooks (called kiholo). From carved pieces of wood, the hooks were tipped with strong, sharpened bone. Whale bone was favored. A curved shape was formed by lashing branches of a living tree and then harvesting the wood after it had grown into acceptable shape, or an entire hook might be carved from whale bone.

in the Hawaiian Islands.

The list includes 101 cases spanning the period 1779 through 1992. Forty-four (43.6%) of the 101 cases are tabulated as having involved a fatality. However, nine of the 44 fatalities (20.5%) are considered to have been likely due to drowning or other causes, which was then followed by shark bite or dismemberment. No cases have been included on this list in which a person was known with certainty to have been dead prior to being bitten by a shark.

Cases of shark attack presented in this list all involve some form of physical injury to the person resulting from a shark. Cases in which "only" the person's equipment was attacked (bitten) are not included. Nevertheless, several cases of this nature have occurred in Hawaii that are of significance. They will be compiled into a separate list at a later date. For example, in October of 1990 Greg Filtzer was lying on his 9-foot long surfboard in Hanalei Bay on Kaua'i when a 12-foot shark bit the board and violently pulled



Joe Thompson was body boarding off northern Kaua'i in October 1985 (case no. 75) when a tiger shark approached him head-on, bit through the board, and severed Joe's right hand.

it and Greg backwards underwater. In the process the shark completely removed a 14-inch wide half-moon shaped piece from the surfboard. Without so much as a scratch, Greg miraculously reached shore safely after the shark released the board. Greg's brother-in-law was on a surfboard next to him and witnessed the entire event.

Below left: Sea turtle with severed flipper, another casualty of hungry sharks.

Below right: This survivor bears the healed crescent-shaped scar of a large shark bite. (The seal's head is to the right of the photo and the hind flippers to the left.)



Shark Attacks by Activity

Activity	Fatal	Nonfatal	Total
Swimming/snorkeling	8	15	23
Spearfishing while snorkeling	1	5	6
Scuba diving	3	1	4
Spearfishing while scuba diving	2	0	2
Hard-hat diving	0	1	1
Surfboarding	2	13	15
Body ("boogie") boarding	2	3	5
Sail boarding	0	1	1
Body surfing	1	2	3
Surfing on an air mattress	1	0	1
Floating on an inner tube (with lobsters)	0	1	1
Wading	0	1	1
Fell into sea from shore or swept out to sea	16	0	16
Fell off boat or boat capsized	3	1	4
Net fishing	0	3	3
Crabbing	1	2	3
Removing shark from fishing line/gaff	0	3	3
Dynamite fishing	1	0	1
Fishing (type unknown)	2	1	3
Activity unknown	1	4	5
Total	44	57	101

Source: George H. Balazs, National Marine Fisheries Service, Honolulu Laboratory

Shark Attacks in the Hawaiian Islands by Species of Shark

Shark species	Fatal cases	Nonfatal cases	Total
Tiger shark	3	4	7
Great white shark	1	1	2
Hammerhead shark	0	2	2
Cookiecutter shark	1	0	1
Subtotal	5	7	12
Unknown species, large	20	9	29
Unknown species, small	1	8	9
Unknown species, unknown size	18	33	51
Subtotal	39	50	89
Total	44	57	101

Source: George H. Balazs, National Marine Fisheries Service, Honolulu Laboratory

Shark Attacks in the Hawaiian Islands Involving Fatalities

a = Death directly due to shark attack.

b = Death likely due to shark attack.

c = Death likely due to drowning or other trauma following shark attack.

d = Insufficient information on which to base an opinion as to cause of death.

Years	(a)	(b)	(c)	(d)	Overall		Total
					Fatal	Nonfatal	
1990-present	2	3	2		7	7	14
1980-1989		2	3	4	9	15	24
1970-1979			1	2	4	8	12
1960-1969			1	3	3	5	8
1950-1959	3		1	3	7	7	14
1940-1949				1	1	5	6
1930-1939				1	1	5	6
1920-1929	1				1	2	3
1910-1919		1		1	2	1	3
1900-1909	2		1	3	6	2	8
1779-1899	2			1	3	0	3
Total	10/44 22.7%	6/44 13.6%	9/44 20.5%	19/44 43.2%	44	57	101

Source: George H. Balazs, National Marine Fisheries Service, Honolulu Laboratory

Shark Attacks in the Hawaiian Islands by Month for the Years 1879-1992

Month	Fatal	Nonfatal	Total
January	3	2	5
February	2	5	7
March	2	4	6
April	7	9	16
May	2	1	3
June	3	6	9
July	4	2	6
August	4	3	7
September	2	5	7
October	1	6	7
November	4	4	8
December	3	5	8

Note: Data are for the 89 cases in which the month of attack is known. Cases occurred during the month of April every year for the six-year period of 1986-1991.

Source: George H. Balazs, National Marine Fisheries Service, Honolulu Laboratory

Register of Shark Attacks in the Hawaiian Islands, 1779-1992

KEY

COMPILER'S OPINION AS TO CAUSE OF FATALITY

* Fatality involved

^a Fatality *directly* attributed to shark attack.

^b Fatality *likely* attributed to shark attack.

^c Fatality *likely* attributed to another cause (drowning, etc.) besides shark attack which was followed by mutilation or dismemberment by shark or sharks.

^d *Insufficient information upon which to base an opinion as to cause of death*, although mutilation and/or dismemberment by sharks had occurred. Fatality may have been directly attributed to shark attack, or may have resulted from another cause. This category also includes an absence of any witnesses or the absence of sufficient body remains to determine cause of death by autopsy.

SOURCE: The following table was compiled by George H. Balazs, National Marine Fisheries Service, Honolulu Laboratory. Complete documentation for each case accompanies copies of this table deposited in the Pacific Collection in Hamilton Library, University of Hawaii, and at the Southwest Fisheries Science Center, Honolulu Laboratory of the National Marine Fisheries Service, 2570 Dole Street, Honolulu, HI 96822-2396.

Case no.	Date	Location	Victim	Circumstances
1 ^{*a}	1779	Maliu, Hawai'i	Nu'u-anu-pa'a hu	Young male gashed on one side of buttocks after being pursued while surfboarding. Subsequently suffered "great pain" and died at Pololū.
2 ^{*a}	1828	Lahaina, Maui	Male	"A man out riding surf at 'Uo was killed by a shark which bit off his limbs and left his body floating." Attack witnessed by a number of Hawaiian chiefs.
3 ^{*d}	2 June 1886	Hāmākua, Hawai'i	Two females	Washed into the sea while fishing from shore; one woman found bitten (fatal), the other woman disappeared.
4 ^{*c}	14 July 1900	Makapu'u Point, O'ahu	Emil Uhlbrecht and an unidentified person	Believed to have drowned when carried out to sea while hunting seashells with companions. "A thorough search was made for the body for several days." Victim's foot with skin and flesh intact "in a fair state of preservation" was found in the stomach of an 11-ft, 9-in shark hooked on the night of 17 Aug. 1900 off Kaka'ako, Honolulu, by John Kinipeki. Positive identification of victim made by Mrs. Uhlbrecht, based on an ingrown toe nail. Human pelvis and femur, blackened and totally denuded of flesh, were also recovered from the shark's stomach. These bones were thought to be from a different person, probably one of several Chinese fishermen lost overboard in the harbor during past months.
5	Early 1900s	Inter-Island Dry Dock at Kaka'ako Street, Honolulu, O'ahu	Emil A. Berndt	Young boy severely chafed when a large shark swam between his legs.
6 ^{*a}	8 Aug. 1902	Kalihi, O'ahu	Young male	Pulled under while crabbing; both arms amputated.
7 ^{*d}	1904	Honolulu, O'ahu	Male	Partial remains of swimmer who had disappeared two days earlier off Diamond Head found in the stomach of a "monstrous shark." Body was complete from the waist down with the exception of one leg. Shark also contained ducks, tin cans, and wood.
8 ^{*d}	1907	Pepe'ekeo, Honomū Hawai'i	Male	Bitten while fishing.
9	8 Oct. 1907	Kalepolepo, Kihei, Maui	Male	Arm amputated at the elbow while retrieving fish caught in net.
10 ^{*a}	17 Jan. 1908	Mānā, Kaua'i	Male	Pulled under while gathering fish stunned by dynamite.
11 ^{*d}	10 Apr. 1909	Pa'uwela, Maui	Mrs. Ah Kim Chong	Nineteen-year-old woman reported to have been swept away by waves while gathering 'opihi along the rocky shoreline. Search party saw a large shark devour what appeared to be part of the missing woman's body.

Case no.	Date	Location	Victim	Circumstances
12	Apr. 1910	Pearl Harbor, O'ahu	Martin Lund	Unprovoked attack on a hard-hat diver. Authenticity questioned by Baldrige.
13 ^{*d}	1910	Hilo, Hawai'i	Male	Bitten while fishing.
14 ^{*b}	3 Mar. 1914	Honomū, Hawai'i	Okomoto	Washed into the sea while picking 'opihi and attacked by two large sharks.
15	28 Sept. 1922	Keawanui, Kamalō, Moloka'i	Male	Bitten while inspecting wharf.
16	7 Apr. 1926	Hilo Bay, Hawai'i	Mrs. Leonard Carlsmith	Severely bitten while swimming 25 yards from shore near the Hilo Yacht Club at 5:30 P.M. "The shark with one bite terribly lacerated her right leg from the heel to the thigh. The calf of her leg was torn nearly to shreds, and the part of her limb above the knee was laid open to the bone." A long necktie was applied as a tourniquet to her leg as soon as she was brought to shore. "Anesthetics" were required twice at the hospital to treat the wounds. According to the victim, the shark that bit her "had a mouth about three feet wide."
17 ^{*a}	18 May 1926	Hale'iwa, O'ahu	William J. Goins	Gave a sudden shriek, then disappeared while swimming at Hale'iwa; remains of body found in 12.5-ft great white shark caught off Kahuku.
18	13 June 1931	Pearl Harbor, O'ahu	Lieutenant Williamson	End of one of the victim's fingers amputated while using a gaff to bring a 10-ft tiger shark aboard a boat after harpooning it. Shark also bit in half the 2-in oak pole of the gaff. The following items were found in the shark's stomach: hind leg of a mule, two bathing suits nearly digested, soldier's belt buckle, a pint of buttons, two horseshoes, corner of a wooden soapbox, anchor chain, two small anchors, and assorted bolts, nails, and copper fittings.
19 ^{*d}	2 Sept. 1931	Kāhala, O'ahu	George Gaspar	Swept out to sea by strong currents while fishing; remains of body found in 18-ft shark caught off Barbers Point.
20	16 Feb. 1932	Lahaina, Maui	Male	Sailor from U.S. Navy vessel <i>Saratoga</i> bitten while swimming about 1 mile off Māla Wharf. Two wounds each 6 inches long were inflicted.
21	4(?) Sept. 1936	Lahaina, Maui	Young male	Leg "badly cut" requiring 19 stitches at the Lahaina Hospital. Swimming with several other children near the "old wharf" when a shark was sighted. Victim disappeared under water for a few seconds, then came to the surface and "made a frantic effort for land." "A large shark was seen again the following morning."

Case no.	Date	Location	Victim	Circumstances
22	30 Dec. 1936	Honokōhau, Maui	John Kekuhi	Bitten on the thigh while diving underwater trying to retrieve the body of a drowning victim wedged between two rocks. Three deep gashes sustained that required hospitalization. Shark reported to be 20 ft.
23	4 Oct. 1939	Kāne'ōhe Bay, Mōkapu, O'ahu	James Akina	Bitten on hand by 5-ft shark while spearfishing in shallow water.
24	1 July 1941	Nānākuli, O'ahu	Hisao Shimoto	Bitten on arm while removing 100-lb shark from fishing line.
25* ^d	5 Apr. 1943	McGregor Point, Maui	Leonard Gant	Disappeared while swimming with three companions after the small boat they were canoeing swamped in high seas. Swamping occurred 3 miles from shore. Victim vanished shortly before reaching land after he fell behind the other swimmers. On 29 Apr. 1943, the "decomposed remains" of the victim's "right forearm" and "brightly colored swimming trunks" were "found in the stomach of a 16-ft shark" caught in turtle nets set out at night "near the Koa house" by Kihei fisherman Alex Akina. Shark's stomach also contained a piece of newspaper dated 25 Mar. 1943. Note: this case was erroneously reported by Gilbert (1963) and Baldrige (1974) as "Leonard Gaut, 4/15/53, O'ahu."
26	1943	Midway, northwestern Hawaiian Islands	Male	Unprovoked attack, but unable to determine circumstances.
27	1943	Midway, northwestern Hawaiian Islands	Male	Unprovoked attack, but unable to determine circumstances.
28	27 June 1947	Mākaha, O'ahu	Valentine Limatoc	Bitten while spearfishing with six other men.
29	19 Sept. 1948	Makapu'u, O'ahu	Noah Kalama	Bitten on leg while swimming.
30* ^c	16 Jan. 1950	Kahakuloa, Maui	Gilbert S. Hotta	Swept into the sea with two companions by a large sudden wave while fishing at night from the rocky base of an overhanging cliff. Another companion (Wayman Fujimoto) managed to cling to the rocks when the wave hit. The partial remains of Gilbert Hotta were recovered from a "huge shark" caught on the morning of 19 Jan. 1950 by rescue workers searching the immediate area. The "badly battered remains" of one of the other missing fishermen (Harold Fujimoto) was also recovered floating nearby. The body of the third fisherman (Hideo Tamura) was never found.

Case no.	Date	Location	Victim	Circumstances
31 ^{*d}	25 June 1951	Kapehu Beach, Laupāhoehoe, Hawai'i	Alejandro Nodura	Swept out to sea while fishing from shore. Victim seen in shark's mouth.
32 ^{*d}	3 Aug. 1952	Ala Moana, O'ahu	Shigeichi Kawamura	Missing while swimming; shark bite found on right side of body.
33 ^{*a}	3 Dec. 1952	Maile, O'ahu	Gerbacio Solano	Bitten on arm while swimming from fishing boat; shark reported to be in excess of 22 ft.
34	18 Feb. 1953	Barbers Point, O'ahu	James S. Takeuchi	Bitten on hand while removing shark from net.
35	4 July 1953	Ka'ula Rock	David Crick	Fell off boat while fishing; bitten on leg.
36 ^{*a}	26 July 1953	Maile, O'ahu	Harold Souza	Bitten on thigh while spearfishing close to shore; 10-ft shark observed.
37	2 Sept. 1953	Waiau, Pearl Harbor, O'ahu	Daniel Gonsalves	Bitten on leg and foot by 5-ft hammerhead shark while crabbing.
38 ^{*d}	8 Apr. 1954	Wailupe, O'ahu	Gordon S. Chun	Missing while fishing from shore; body recovered in mutilated condition.
39	1954	Moloka'i	Severino	Unprovoked attack, but unable to determine circumstances.
40	Apr. 1955	Hilo, Hawai'i	Kanematsu Oshiro	Bitten on hand while fishing from boat.
41	20 Sept. 1955	East Moloka'i	Phillip C. Diez	Bitten on arm while swimming.
42 ^{*a}	13 Dec. 1958	Lanikai, O'ahu	William S. Weaver	Leg amputated while surfing on an air mattress near Mokulua Islands; 15- to 25-ft shark (believed to be tiger shark) observed near body when fire-rescue personnel recovered it 2 hours later. No additional bite marks present on the body.
43	1950s	Waikīkī, O'ahu	David Lloyd	Provoked attack, but unable to determine circumstances.
44	27 Feb. 1960	Mākena, Maui	John Benjamin	Severe lacerations obtained while spearfishing.
45 ^{*d}	27 Dec. 1960	Maile Point, O'ahu	Harold Riley	Swept out to sea while net fishing; 20-ft shark observed attacking victim; body recovered off Nānākuli.
46	2 Aug. 1961	Pearl Harbor, O'ahu	Kazuhiko Kato	Bitten on hand by 8-ft shark while net fishing.

Case no.	Date	Location	Victim	Circumstances
47 ^{*d}	8 Apr. 1963	Hāpuna Beach, Hawai'i	Roy C. Kametani	Washed into the sea while picking 'opihi; parts of body recovered.
48	12 Apr. 1963	'Awili, South Kona, Hawai'i	Aiona Aka	Bitten on leg and foot while surfing; 12- to 15-ft shark observed.
49 ^{*d}	20 Sept. 1967	Kailua Bay, O'ahu	Male	Victim lost at sea when boat capsized between O'ahu and Moloka'i; remains of body found in 11-ft tiger shark.
50	9 Mar. 1969	Mākaha, O'ahu	Licius Lee	Bitten on leg while surfing; identified as great white shark based on teeth marks in surfboard; dead whale recently removed from the area.
51	11 Nov. 1969	Barbers Point, O'ahu	D. R. McGinnis	Bitten on tank while scuba diving for lobsters; abrasions on arms and legs and cut on ankle resulting from contact with shark.
52 ^{*c}	31 Mar. 1970	Waimea Bay, O'ahu	Ernie Reathaford	Swept out to sea while bodysurfing; 15- to 18-ft shark observed.
53	24 Oct. 1970	Brennecke Beach, Po'ipū, Kaua'i	James C. Mattan	Bitten on shoulder and arm while bodysurfing.
54	16 Mar. 1972	Waihe'e, Wailuku, Maui	Adam Gomes, Jr.	Bitten on leg while spearfishing.
55	17 Aug. 1972	Waimanu, Honoka'a, Hawai'i	Eric Fotherby	Bitten on arm by 8-ft shark while spearfishing.
56	9 Jan. 1973	Ho'okipa Beach, Pa'ia, Maui	Robert Sterling	Bitten on leg while surfboarding close to shore; 4- to 6-ft shark observed in area; wound required 100 stitches.
57	18 Dec. 1973	Kalama Beach, Kihei, Maui	Gary W. Floyd	Bitten on leg while swimming close to shore.
58	10 June 1976	Kama'ole Beach, Park No. 1, Kihei, Maui	Donald Gard	Bitten on foot and leg by 3- to 5-ft shark while swimming.
59 ^{*d}	16 July 1976	Māhā'ulepū, Kōloa, Kaua'i	Stephen C. Powell	Missing while scuba diving; lower remains of body recovered.

Case no.	Date	Location	Victim	Circumstances
60 ^{*c}	1976	Off Lahaina, Maui	Danson Nakaima	Apparently passed out while scuba diving for black coral at a depth of 180 ft. About 30 large sharks seen near partially devoured remains of the body.
61	21 Apr. 1977	Ka'anapali, Maui	Ruskin Vest	Bitten on arm by 4-ft shark while swimming close to shore.
62	27 Nov. 1978	'Ewa, O'ahu	Wendell Cabunoc	Severely bitten on arm while surfing; 8-ft shark observed.
63 ^{*d}	1979(?)	South Kohala, Hawai'i	Elderly male	Disappeared while fishing from shore. Fire Department divers only found a hand and a flashlight.
64	4 Aug. 1980	Puamana, Lahaina, Maui	Mark Skidgel	Bitten on left side of body while resting on a body board 40 ft from shore; identified as 14-ft tiger shark; wound required 52 stitches.
65 ^{*d}	24 May 1981	Ha'ena Beach Park, Kaua'i	Roger B. Garletts	Missing while scuba diving at a depth of 60 to 80 ft; only diving equipment recovered, including shredded wetsuit bearing numerous tooth marks. Victim reportedly spearfishing in murky, choppy water.
66 ^{*c}	12 June 1981	Honoli'i Pali, Hilo Bay ('Alae Point), Hawai'i	Preston D. Soley	Retrieval of floating body hindered by 4-ft shark. Autopsy showed that death was probably from drowning. One-third of body missing due to bites by at least four sharks.
67 ^{*d}	24 Aug. 1981	Keaukaha, Hilo, Hawai'i	Ernest Watson	Disappeared while fishing from shore. Leg found 7 days later wedged in rocks 150 yd offshore.
68	9 Nov. 1981	Lā'au Point, Moloka'i	Leo A. Ohai	Bitten on hand while untangling crab-trap line from propeller. Seven-foot shark had followed the boat for 3 days and reportedly was very unusual looking with a "flat head."
69	13 Dec. 1981	Nimitz Beach, Barbers Point, O'ahu	Melvin T. Toma	Severely bitten on right leg by 12-ft tiger shark while swimming at the surface shortly after entering water; site located 300-400 yd from shore over a depth of 20 ft. Looking for fish, but none had been speared when attack occurred; wound required 200 stitches.
70	14 Feb. 1982	White Plains Beach, Barbers Point, O'ahu	Lisa Miller	Bitten on left leg while wading in 3 to 4 ft of water; 17 stitches required.
71	14 Feb. 1982	White Plains Beach, Barbers Point, O'ahu	Female	Bitten on right foot while swimming in shallow water.

Case no.	Date	Location	Victim	Circumstances
72	13 June 1982	Ho'okipa Beach, Pa'ia, Maui	Scott Shoemaker	Severely bitten three times on the thigh after falling into water while sail boarding 100 yd outside the breakers. Wounds required 120 stitches.
73	3 June 1984	Kāne'ohe Bay, O'ahu	Susan Buecher	Bitten on the foot while towing her sister on a plastic ski board. Incident happened at 5 P.M. in water 5 ft deep, about 400 yd from shore. Surgery and lower leg cast required to repair damaged tendons; 4- to 5-ft hammerhead shark believed to have been responsible.
74	12 Oct. 1985	Barbers Point, O'ahu	Dominic Dela Cruz	Severe gashes to left arm requiring surgery. Attack occurred off Barbers Point Lighthouse while floating on an inner tube after diving for lobster.
75	18 Oct. 1985	Princeville, Kaua'i	Joe Thompson	Right hand and portion of forearm amputated by a large shark (likely a tiger shark) while body boarding. Gash sustained to left hand. Right anterior side of board also cut away during same bite by shark.
76 ^{*c}	20 Apr. 1986	Kalihiwai, Kaua'i	Levi Chandler	Fell from rocks and disappeared while fishing at Kalihiwai Point. Pieces of clothing and human flesh were recovered by Fire Department divers who encountered a large shark.
77 ^{*b}	15 Apr. 1987	Kailua-Kona, Hawai'i	Daniel Kennedy	Last seen swimming from shore out to an anchored sailboat. Swimming trunks found bitten in half on the bottom.
78	25 Mar. 1988	Running Waters Beach, Ninini Point, Kaua'i	Aaron Kawado	Bitten on the ankle while bodysurfing in waist-deep water. Surgery required to repair severed vein.
79 ^{*d}	15 Apr. 1988	Waihe'e, Maui	Avery Goo	Lost at sea when the 21-ft powerboat he was on capsized in rough seas. Pieces of human stomach, intestines, and pancreas believed to be from victim found several days later washed ashore along the Waihe'e shoreline.
80 ^{*d}	8 Jan. 1989	Wailua, Kaua'i	Ken Ahlstrand	Disappeared while swimming in strong current with three other people. A 2-day search by helicopters, Civil Air Patrol, and firemen failed to find any trace of the missing man. Lower part of body found 6 days later on 14 Jan. 1989 near seawall by the Wailua Golf Course. X-rays of remains revealed teeth marks in femur and tibia.
81	20 Jan. 1989	Waialua Beach, Moloka'i	Earl Dunnam	Ten-year-old boy bitten on the foot by a 6- to 8-ft hammerhead shark while riding a body board 200 ft from shore. Wound required eight stitches. Bite occurred to a naked foot, and not to the foot wearing a swimfin.

Case no.	Date	Location	Victim	Circumstances
82	3 Apr. 1989	Ho'okipa Beach, Pa'ia, Maui	Sam McLain	Sustained a 4-inch long crescent-shaped wound on the calf while paddling on a surfboard in whitewater near rocks 50 yards from shore. A sharp "tug" was felt at the time of injury; 13 stitches were used to close the wound.
83	Apr. 1989	Kekaha Beach, Kaua'i	William P. Allen	"Tremendous impact" felt on left leg while paddling on a surfboard in glassy water just beyond swells. Impact lifted board and surfer 2-3 ft out of the water. Left thigh raked with a series of scratches believed to have been caused by teeth. Skegs on the board were knocked loose, and a strip of fiberglass 8 inches wide by 5 ft long was torn off. Victim convinced he was attacked by a "huge shark."
84	29 June 1989	Anahola, Kaua'i	Anthony Paden	Severely bitten on the foot after falling off a surfboard about 20 ft from shore. A "big chunk" taken out of victim's ankle, and "bite marks" inflicted all around the foot. Achilles tendon was half-severed, requiring surgery and a cast.
85 ^b	14 Oct. 1989	Kahe Point, O'ahu	Ray Mehl, Jr.	Abruptly disappeared while scuba diving as a novice with his partner at a depth of 27 ft, 750 ft from shore near the cooling water discharge pipe of the Kahe Point Power Plant. Unusual behavior exhibited by parrotfish just before disappearance. Victim was 10-15 minutes into the dive with nearly a full tank of air. Dive partner conducted a circle search, but could not locate victim. Time of event was 4:30 P.M., visibility 25-30 ft. Decapitated body with amputated left arm found 200 ft to the west by fire rescue divers the following morning. Large tiger shark suddenly appeared and proceeded to consume rest of body before rescue divers could retrieve it. Small piece of flesh and some dive equipment later recovered.
86 ^c	12 Nov. 1989	'Ehukai Beach Park, Sunset Beach, O'ahu	Edward Malek	Knocked down and swept away by large waves while wading close to shore at 6 P.M. Lower portion of body, sheared at waistline, recovered by fire rescue personnel on the morning of 15 Nov. 1989, 1.5 miles to the southwest. Note: The rare sighting of a shark was made at 'Ehukai Beach Park on 5 Nov. 1989, at which time all swimmers were cleared from the ocean for an hour.
87	19 Dec. 1989	90 miles east of Hilo, Hawai'i	George Sohswel	Crew member of the 51-ft fishing vessel <i>One Ki</i> sustained a 23-cm-long bite on his left leg and four 7-cm lacerations to left foot; 3 days hospitalization required. Victim transported to Hilo by Coast Guard helicopter. Wound was inflicted by a shark brought aboard the vessel.

Case no.	Date	Location	Victim	Circumstances
88 ^{tb}	17 Feb. 1990	Mōkapu, Kāne'ohe Marine Corps Air Station, O'ahu	Roy T. Tanaka	Failed to return with his partner (Jake Hernandez) while scuba diving and spearing parrotfish in water 40 ft deep, 200 yards from shore (near firing range) at 9:30 P.M. 22-ft boat nearby had overturned a short time earlier after being hit broadside by a wave. Victim's tank, backpack, dive light, and mask were found on the bottom but not retrieved. Body with amputated right arm sighted from helicopter at 3 P.M. 18 Feb. 1990 between Makai Pier and Rabbit Island. Two sharks (8 and 14 ft) seen nearby. The larger shark, apparently reacting to the presence of the helicopter, proceeded to consume all but torso and legs before retrieval.
89	1 Apr. 1990	Silver (Silva) Channels, Waialua, O'ahu	Everett Peacock	Deep abrasion causing profuse bleeding inflicted to 10-inch area on lower left leg while sitting on a surfboard. Also sustained two deep 3-inch long gashes above left ankle. Event occurred before 7:30 A.M. in murky water 150 yards from shore.
90	3 Apr. 1991	One'ula Beach Park, 'Ewa Beach, O'ahu	Todd R. Wenke	Bitten on the left leg and foot while sitting on a surfboard 350 yards from shore at 5:30 P.M. at a site known as "Shark Country" 1/4 mile east of One'ula Beach Park. Attack resulted in a 5-inch-long bone-deep wound on each side of the foot, and a 9-inch-long bone-deep wound on the calf; 30 stitches, tendon surgery, and a cast required. Only about 18 inches of the shark's head was seen and no positive identification was possible. Shark had "a very large girth."
91	26 May 1991	Mā'ili Beach, O'ahu	Frank (Scott) Betz	Bitten on the right calf while sitting on a surfboard 100 yards from shore at 4:45 P.M. Attack resulted in a 4-inch and a 7-inch-long wound requiring stitches. Shark estimated to be 8 ft long. Event occurred in murky water.
92 ^{tb}	19 Nov. 1991	Māliko Point, Maui	Suk Kyu (Steve) Park	Swept into the sea by a large wave while fishing from the rocky coastline at 4:30 P.M. Victim's son went for help shortly thereafter when it became apparent that surf conditions were too rough for his father to swim ashore. When last seen, victim was treading water signaling the son to go for assistance. Help arrived about 30 minutes later, but no sign of the victim could be found. Victim's shorts and shirt were recovered from the ocean bottom the following morning by fire rescue divers. Both garments had large portions missing on the left side. Bite marks present were consistent with attack by a 12-ft tiger shark. Note: Victim was reported to be a strong swimmer in good physical condition.

Case no.	Date	Location	Victim	Circumstances
93 ^a	26 Nov. 1991	Olowalu, Maui	Martha J. Morrell	Snorkeling with a female companion at 9 A.M. near reef edge in partly cloudy water 10–15 ft deep about 100 yards from shore and 50 yards from the end of an old pier next to the victim's beachfront home. An 8- to 11-ft shark passed by the companion and proceeded to attack the victim, initially on the right arm. A small boat was used to recover the body a short time later. Amputations included the victim's right leg at the hip joint, the left leg sheared through the femoral neck, the right forearm, as well as numerous bites and tissue loss elsewhere.
94	26 Nov. 1991	Olowalu, Maui	Louise Sourisseau	Snorkeling companion to Martha J. Morrell. Abrasion to right calf when large shark rubbed against her in association with fatal attack on Mrs. Morrell. After the initial attack on Mrs. Morrell, the shark, estimated to be 8–11 ft, swam slowly under Louise Sourisseau who assumed a motionless position floating on her back. When first seen before the attack, the shark was coming from a seaward direction. No other significant marine life was observed in the vicinity before or after the attack.
95 ^b	19 Feb. 1992	Leftovers, near Waimea Bay, O'ahu	Bryan Adona	Disappeared while bodyboarding late in the afternoon at a surfing site about 1.2 miles southwest of Waimea Bay (near 61-350 Kamehameha Highway). The following morning, 20 Feb. 1990, his board was found washed ashore at Waimea Bay with a 16-inch crescent-shaped piece missing from the anterior left side. Distinct serrations of shark bite were present in board and severed segment of rubber leash still attached to board. Danny Titilah, the last person to see Bryan Adona alive, saw a large shark shortly after he and Adona paddled out toward separate breaks at Leftovers. Others on shore also reported seeing a large shark in the vicinity. Left swim fin, identified as Bryan Adona's, was subsequently found during an extensive search. Strap of fin was severed, but without serrations.
96	28 Mar. 1992	Cannons, Hā'ena, Kaua'i	Jude Chamberlain	Scratches and small puncture inflicted to foot when a large shark bit her surfboard while paddling seaward 10 ft from reef edge (and 85 ft from shore) in clean water about 10 ft deep; 12–14 inch crescent bite marks made in both sides of board. Shark shook board three times, then pulled it completely under water and dragged victim by leash for 20 ft before leash severed and shark released surfboard. Attack occurred at about 6:45 A.M. after victim had been surfing there for a short time with a friend (Mike Cox), who witnessed the attack at close range.

Case no.	Date	Location	Victim	Circumstances
97* ^c	23 July 1992	Wai'anae, O'ahu	Zosimo Popa	Victim and his son (Jeffrey Popa) failed to return from an overnight fishing trip in a 14-ft boat. Victim's body was found on the morning of 23 July, tied to an ice chest floating 15 miles off the Wai'anae coast. Victim had sustained two cookiecutter shark bites to the lower back. Wounds were 2 inches in diameter by 1.5 inches deep and were "probably post mortem." Cause of death was "asphyxia by drowning." Life jackets and debris were recovered in the vicinity, but victim's son and the boat were never found.
98* ^c	21 Aug. 1992	Twin Arches, Hana Ranch, Maui	Chester N. Shishido	Fell from a cliff while fishing and disappeared in strong current. Rescue efforts were immediately made by victim's brother and, 30 minutes later, at 2:30 P.M., by helicopter and a fire rescue unit. No trace of victim was seen and the search was stopped at 5:30 P.M. Body was recovered the following morning, 22 Aug., 200 yards from shore at a depth of 65 ft. Amputations included the left arm, right hand fractured at the wrist, as well as other numerous lacerations and tissue loss consistent with shark bites that "appeared to be post mortem."
99	22 Oct. 1992	Laniākea, O'ahu	Eric Gruzinsky	Bruises and scratches to underarm and chest resulting from a 10–12 ft shark biting a crescent-shaped piece from victim's 6 ft 4 in. surfboard. Attack occurred at 7:50 A.M. in clear water 15 ft deep, 150 yards from shore.
100* ^a	5 Nov. 1992	Kea'au Beach Park, O'ahu	Aaron A. Romento	Severely bitten in three places on the right leg by a 10–12 ft shark. Victim was bodyboarding at 9:45 A.M. in clear shallow water, 30 yards from shore. Death resulted from blood loss and shock a short time after victim paddled ashore. Wounds did not involve removal of tissue.
101	23 Dec. 1992	Chun's Reef, O'ahu	Gary M. Chun	Cuts to left hand resulting from 10–12 ft shark biting a 15 in. crescent-shaped piece from victim's surfboard. Attack occurred at 5:30 P.M. while victim was lying on surfboard 100 yards from shore in the presence of 20 or more other surfers. Victim was surfing "near a channel where the current flows like a river through a break in the reef."