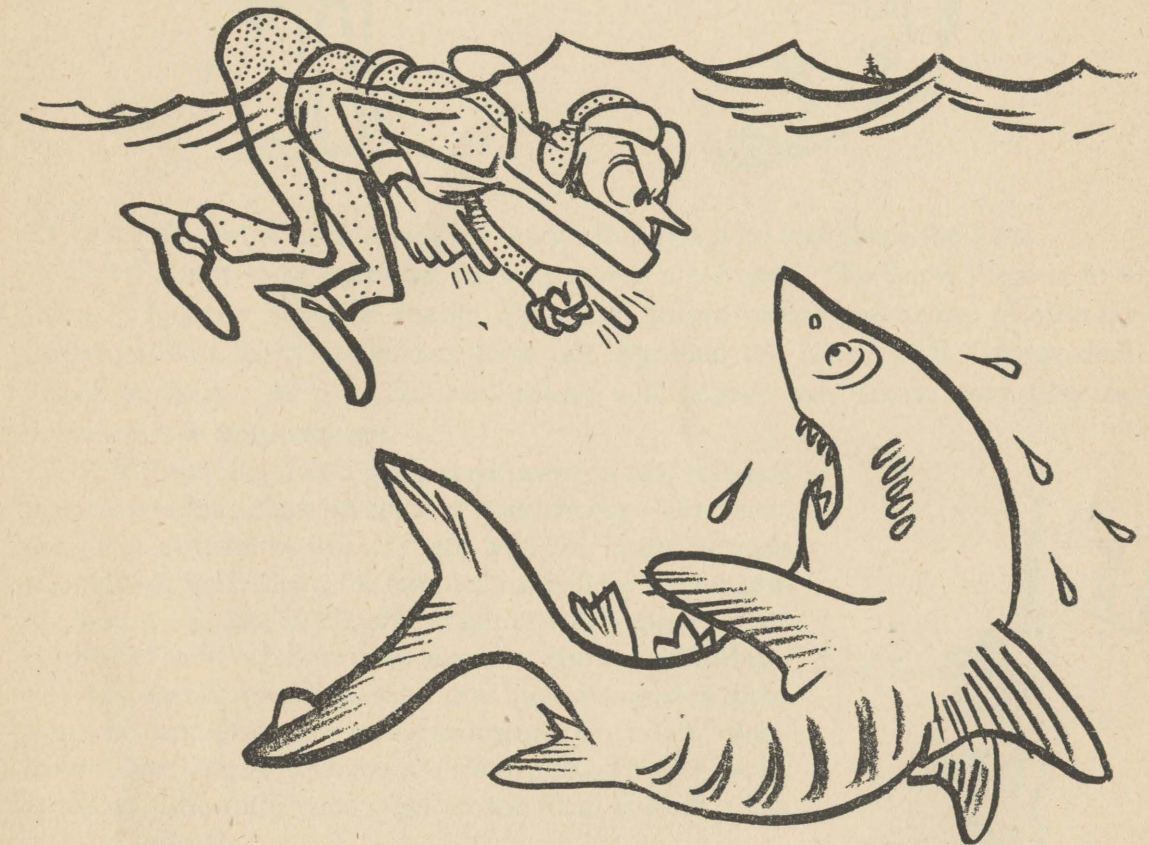


SHARK SENSE



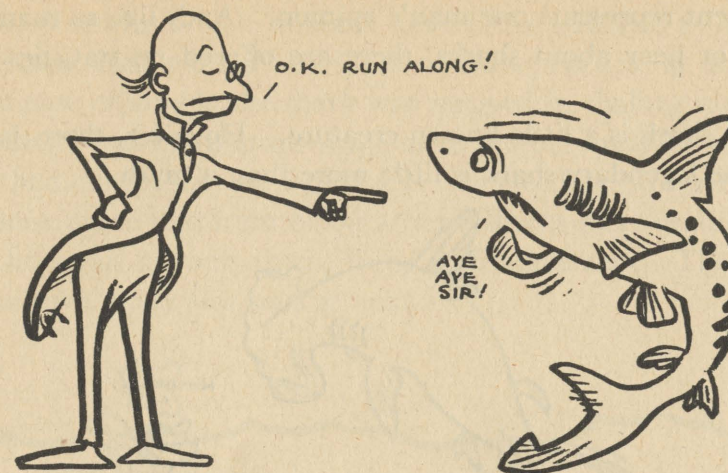
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SHARK SENSE



AVIATION TRAINING DIVISION • OFFICE OF THE CHIEF
OF NAVAL OPERATIONS • U. S. NAVY • ISSUED MARCH 1944

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MEN WHO KNOW most about sharks are the men who fear them the least.

That is not to be taken as the toastmaster's old saw: "To know them is to love them." Nobody loves a shark. Deep-sea sailors often fear them. Commercial fishermen hate them. Scientists have not dignified the breed with a great deal of intensive study. As a result landlubbers will believe any shark story they hear, provided it is gory enough.

It is true that, if you get forced down in any tropical waters, you may come in contact with sharks. However, the more you know about them and the fewer legends about them you believe, the happier you will be in your predicament. Calm, intelligent conduct will enhance your chances of survival more than anything else known to date.

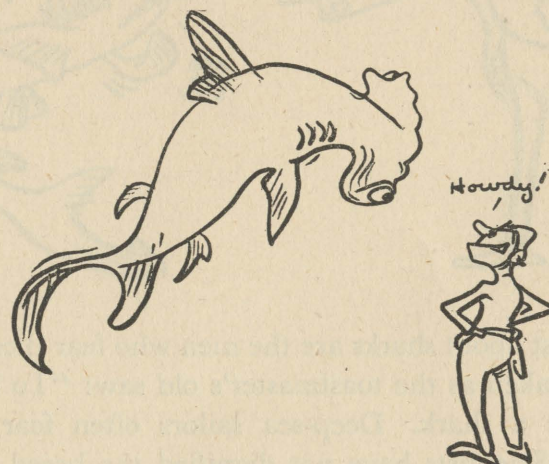
Any carnivorous fish—and that includes most of them from the tiniest minnow to the monstrous so-called "man-eater" tiger shark—will go for a freshly cut piece of meat. It makes little difference whether the meat is from a fish or land animal.

To put it on the line, at the outset of this pamphlet, there are a few authenticated cases of sharks attacking and killing human beings. But, remember that there also are authenticated cases of humans getting struck by lightning. One writer stated the chances of being killed by lightning were greater than the chances of being killed by a shark.



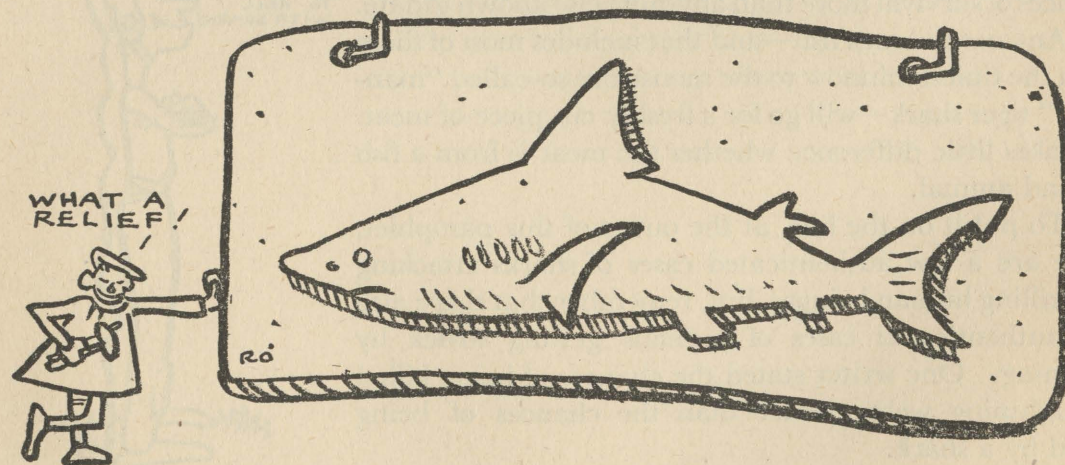
That statement represents one man's opinion. And, like so many of the statements you read or hear about sharks, there are offered no statistics to support or refute it.

In short, the shark is a little known creature. However, there is ample reason to believe that the legendary shark is little more than a myth.



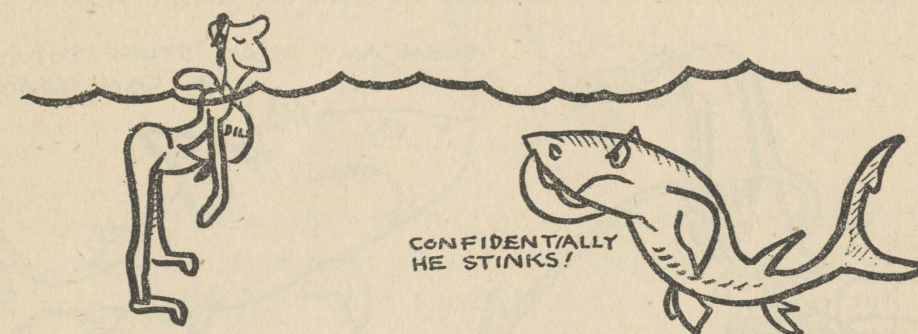
This manual was prepared for the information of naval personnel who may encounter sharks in tropical waters. It represents a digest of the known pertinent data, and the considered opinions of serious-minded commercial shark fishermen and sponge fishermen whose daily work brings them in close contact with all kinds and sizes of sharks.

It is the opinion of these men—the scientific writers and the fishermen—that there is practically no danger that an unwounded man floating in a life jacket will be attacked by a shark.



Circumstances under which humans have been attacked by sharks, when the details were known, indicate the attacks came about because of unusual conditions. In at least one case of attack, the shark was trapped in shallow water, and like any "cornered animal," was fighting his way out in the only way he knew. In another case, a bather had cut his foot on a shell and was bleeding profusely.

All shark men agree that fresh blood attracts sharks more readily than any other thing. As to how this attracts them, there is disagreement. The general belief is that the sharks have a *very keen sense of smell*.



Some experts declare the shark hunts his food exclusively by the sense of smell. Others think he hunts both by sense of smell and sense of sight. Science has yet to demonstrate that sharks can smell, in the way humans understand operation of the olfactory system. This gives rise to another "sense" idea: vibrations in the water.

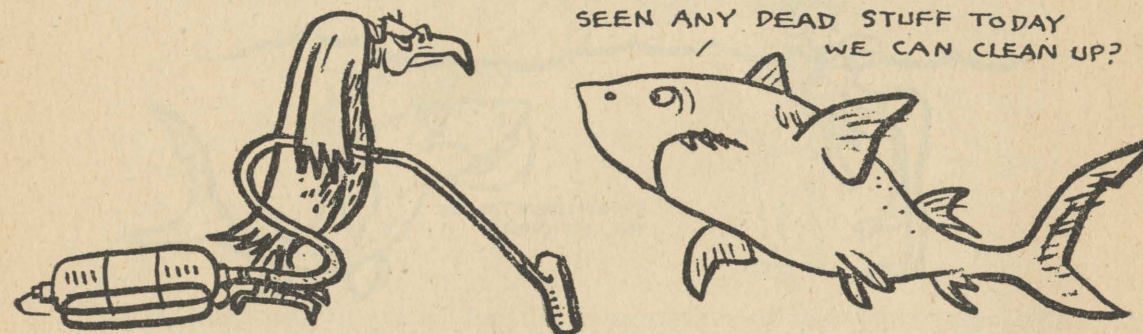


There is a report—not authenticated—that a Marine Corps major in Guam frightened and drove off sharks by beating two small stones together under water. Whether the water vibrations caused by pounding the stones together frightened the sharks is not known. It is known with certainty, however, that sharks are easily frightened. It is possible that the mere presence of the officer frightened them off.

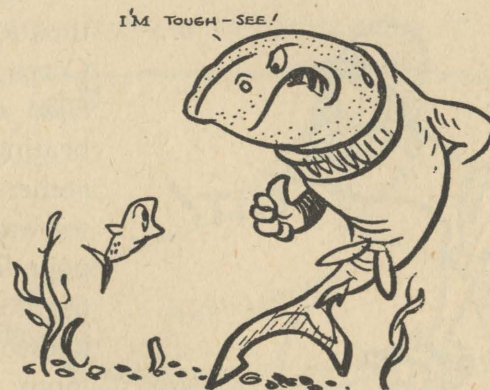
Sharks, like all "denizens of the deep," as the horror story writers call them, are wild animals, and their conduct is not unlike that of the shore-based wild animals. Their whole purpose in life centers around survival, eating, and procreating.

As to survival, the shark has done better than most marine animals. He is, according to ichthyologists, a hold-over from a previous age. He has come down to this age without change, just as he was a million years ago, while his playmates of that age either have suffered extinction or have evolved into different sorts of fish.

His eating habits are those of a scavenger. He lives on meats—preferably dead and rotting meats. His mouth is big and his teeth are sharp. Having cartilage

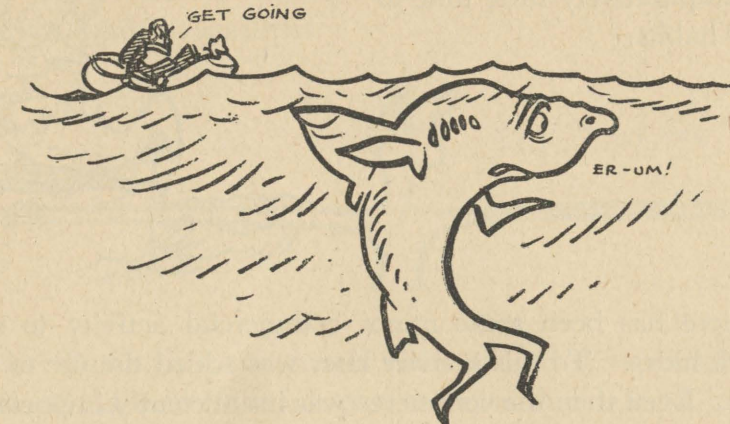


instead of bones, his teeth are set in pliable bases. He can adjust them for cutting or chewing by pitching the points forward or backward—that is variable pitch teeth. His jaws are powerfully muscled, and apparently he can digest almost anything that he can swallow.



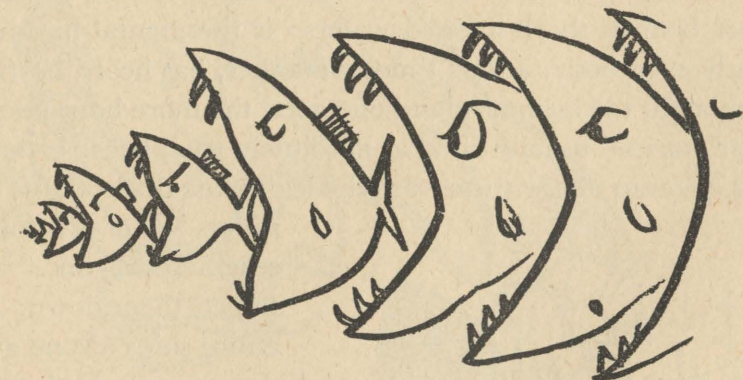
His hunting habits display both caution and cowardice. He circles a prospective meal and looks it over carefully before attacking. If it is dead, or wounded, or smaller than he is, and if victory appears certain, he launches his blitzkrieg with boldness

and ferocity. If it appears there is likely to be some tough opposition, he withdraws to a previously prepared position and finds business on another front.



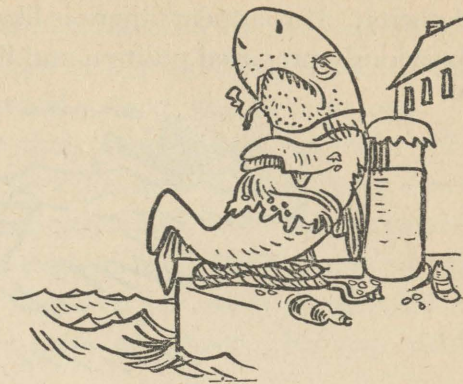
His choice of food follows the pattern of the struggle for life among practically all the wild animals, whether ashore or afloat. The weaker ones constantly fall prey to the bigger ones. Remember the old nursery rhyme:

Little fish have larger fish
Swimming 'round to bite 'em.
And these have still larger fish—
And so, *ad infinitum*.



Until recently, sharks have been considered merely as a menace—a menace both to humans who are unfortunate enough to be cast into the sea, and a menace to edible fishes of the sea. Any fisherman, whether amateur or commercial, knows that the appearance of a shark on a fishing bank will drive off the other fish. Because of

his relative worthlessness, commercially, the ichthyologists and marine biologists have devoted comparatively little time to the study of his habits.



For years there has been some minor commercial activity to supply a small demand for shark hides. To this activity later was added the use of the carcass for making fertilizer. Even then the commerce was insufficiently important to attract a great deal of scientific research. Recently, however, it has been discovered that the shark liver is 200 times as rich in vitamins as the liver of the cod fish. With the current vitamin-taking fad, great impetus has been given to commercial shark fishing, and the large operating companies are employing their own scientists to study these outcasts of the sea. Now, shark hides are marketed as "sea leather," and no more do the carcasses make fertilizer; they turn up in grocery stores, salted and dried, as *bacalao*. And wholesome food it is, too. This is merely one version of "man bites dog."

The main hurdle to take concerning sharks—should you be adrift in a life jacket or rubber boat in shark-infested waters—is the mental hazard.

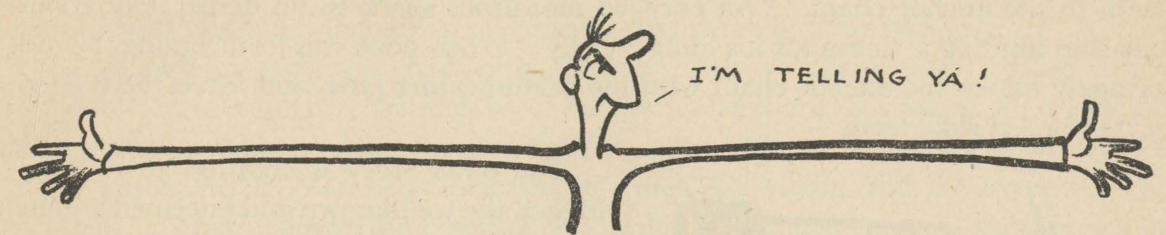
Nearly everybody, at one time or another, has heard horrible tales about sharks. Oddly enough, the farther inland one goes, the more horrendous these tales become.

These stories—usually cited as absolutely true, because the narrator knew a man who was a cousin of a witness—are the legitimate descendants of the tales the ancient

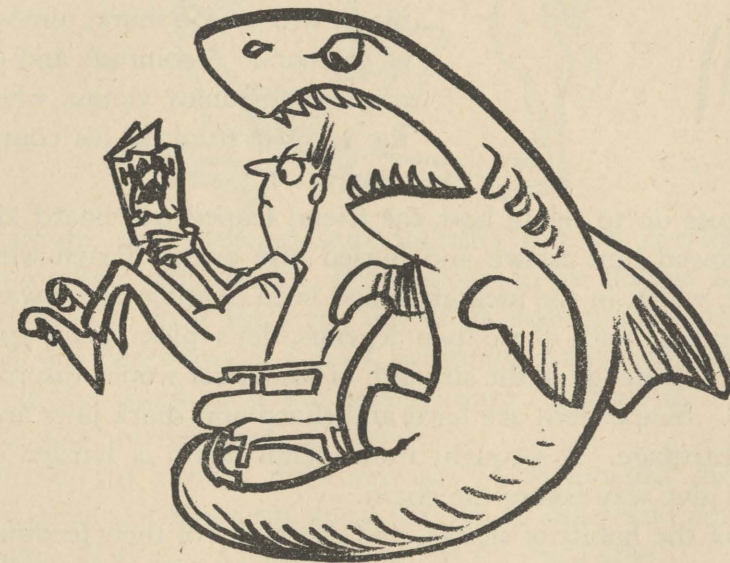
sailors told of sea monsters, sea serpents, and seagoing dragons. Time and travel have tamed them down. Sharks do not devour entire ships at one gulp, as did the old sea dragon, nor do they cave in the ship's side with a swish of their tail, as did the sea serpent. But push a fourteenth century sailor overboard, and he'll land in the mouth of a monstrously big shark, every time.



Later, when ships began year-long cruises under sail, about the only excitement the lads had was watching sharks swim about, and imagining what would happen if a man fell overboard. On top of that, a shark is a fish, and no fish story ever allowed itself to be handicapped by statistics.



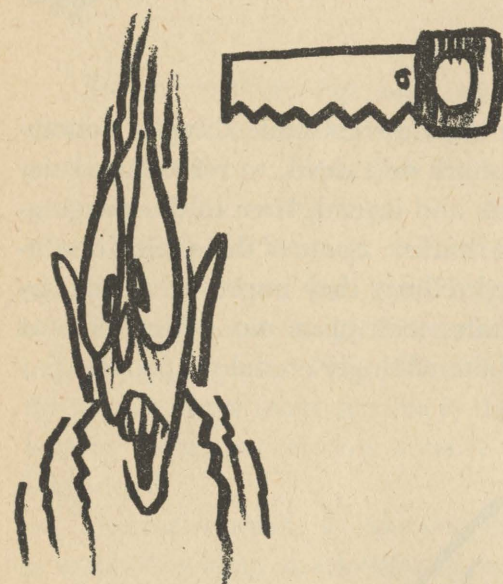
A shark, like Satan, is a completely unloved and disreputable thing. Nobody ever undertook, out of interest in fair play for a shark or a devil, to refute any story about either of them. The result was that the lore and legend, born in the imaginations of lonely sailors, became accepted facts about sharks. Some of these tales, doubtless, had a grain of truth in them, but in repeated tellings they improved so that by the beginning of the nineteenth century, shark tales took place alongside stories of pirates and buried treasure in the imagination of the willingly credulous people.



Here are two of these legends traced through the ages for you. The two selected perhaps had more to do with creating an unreasonable fear in the minds of modern

people than any of the others. They have been quoted and requoted for more than a hundred years. The first is:

A chronicler for Capt. James Cook, the English navigator who explored the South Pacific and Indian Oceans in the eighteenth century, relates how a shark buried his teeth in the anchor chain. "An enraged monstrous shark swam desperately about our ship hunting a victim for his hungry belly. When none was forthcoming, he did savagely attack the anchor chain with his death-dealing jaws, and leave there deep scars from sawlike teeth."



The other story is credited to a "Mr. Hughes, the well-known and esteemed author of the History of Barbados":

"In the reign of Queen Anne a merchant ship arrived at that island from England; some of the crew, ignorant of the danger of the recreation, were bathing in the sea, when a large shark appeared and swam directly toward them; being warned of their danger, however, they all hurried aboard, where they arrived safe, except one poor fellow, who was bit in two by the shark, almost within reach of the oars. A comrade and intimate friend of the unfortunate victim, when he observed the severed trunk of his companion, vowed vengeance."

The story goes on to relate how the friend leaped overboard killed the shark with his knife, towed him ashore and buried him on the beach with the uneaten half of his friend, which in the meantime had been floating in the water.

Before continuing with these two legends, let's pick them apart. Common sense and a little knowledge of the strength of materials would disprove the anchor chain biting one. Shark teeth are hard and sharp and shark jaws are powerful but they are set in cartilage. A wrought iron anchor chain is harder than cartilage. The teeth would give way before the chain.

Knowledge of the habits of sharks, and especially of their feeding habits, blows up the second story: A shark does not "swim directly at" a group of bathers. He exercises extreme caution. It is only after he decides there is no danger to himself that he screws up his courage enough to attack.

Another point was overlooked by the narrator. If the shark had bitten the hapless swimmer in two, unquestionably there would have been blood flowing. All the sharks in adjacent waters would have come plunging in for food. In no time—in the waters off Barbados—a dozen or more sharks would have been milling around snapping at anything, including each other, that came in their paths.

Jack London used the chain-biting episode early in this century, in one of his short stories, to emphasize the ferocity of the particular shark that was about to devour a villainous mutineer. Almost contemporaneously, Morgan Robertson wrote a short story based on the Barbados incident, in which the victim and the avenger were brothers. Then followed an epidemic of "pulp" stories dealing with the horrors of sharks.



In the meantime the moving-picture industry did not overlook the dramatic effect of killing a villain with sharks. But that was in the days of silent movies, and their ingenuity failed to milk the scene dry of its potential horror. The best they could do was show a panorama of a shark swimming on the surface, then screen the frightened face of the victim as he was being chunked overboard. The idea of using a real shark was too horrible even to consider.

Then suddenly, the day of days arrived! A Hollywood dream came true! Some genius invented a mechanical shark that could look—and act—ferocious, and was perfectly safe. Here was a challenge to Art for Art's sake!

A major studio bought the mechanical shark for \$30,000, and assigned Mr. X, the master of horror, to direct a picture. Mr. X felt he needed a story—not an ordinary story, but a super-colossal epic, the like of which had never been filmed.

The studio rose to the occasion. Such a story as Mr. X wanted had never been written. But it would be. It not only had to be a story, it had to be a drama. Shakespeare was dead, and George M. Cohan was more of an actor than a writer, anyway. But there was Mr. Y. He not only was a Broadway playwright, but he was a dramatic critic on a New York newspaper. He couldn't miss. He was hired.

Mr. Y went to work and in due time he came up with a combination of the chain-biting episode from Captain Cook, and the avenging friend yarn from the Barbados. The shark's victim was not a swimming sailor, but the female menace—a trollop with a heart of gold but too mixed up in opium running and white-slave traffic ever to be purified.

Then came the story conference.

"We got thirty grand in this shark," explained Mr. X. "He's got to do something real dramatic."

"Instead of biting the anchor chain, and leaving his teeth marks," said Mr. Y with some sarcasm, "he could bite the chain in two, and eat the anchor."

"That's the idea," agreed the director, "only it would be more dramatic for him to tow the ship to sea—say to Singapore, maybe?"

"Zanzibar," insisted Mr. Y.

"Right," said Mr. X. "Now, we'll try to get the okay of the star. That big dope won't star in a picture he doesn't okay."

The great actor—now gathered to his fathers—was called in. The author carefully outlined the story to him.

"I think it stinks," he said. "It ain't got no drama."



"But you missed the point," explained the director. "Y' here, is new. He left out the dramatic part. You not only are going to smuggle opium, steal pearls from the tribal chief, and be the captain of the mutiny ship, you are going to be one-legged and blind in one eye!"

"Yeah?" said the actor. "Sounds all right."

"And your other eye," put in Mr. Y, "is going to hang out of the socket that far!"

"And it will take you 2 hours to make up," added the director. "Your make-up will be so painful, you can only work 30 minutes at a time."

"Gee," said the actor. "Sounds dramatic, don't it?"

The picture was made. Instead of being a supercolossal epic, it merely turned out to be colossal. But it inaugurated a whole series of shark pictures. The "quickie" outfits could not afford mechanical sharks, but they would not accept defeat. There was an ancient tiger shark in the aquarium which could be rented for \$25 a day, and for \$60 a week; they hired stunt men who were not afraid to crawl in a glass tank and wrestle with him. The result was an epidemic of shark pictures.

And so, through fiction reading and movie going, the world became conscious of shark horrors. It now is as natural for the average person to be horrified with the idea of getting in the same ocean with a shark as it is frightening to come in sudden contact with a snake.

There are almost as many different kinds of sharks as there are shark stories. The one that gets the most play in horror tales is the *galeocerdo arcticus* or tiger shark. He is billed in fiction and *pseudo-scientific* articles as the "man-eater." He sometimes attains a length of 30 feet or more, and is a native of the West Indian waters and of the Indian Ocean. He has black spots or stripes on his back—as if that would interest a man floating around one in a life jacket!

Pound for pound, this shark is no more and no less ferocious than many of the other sharks.

The truth about sharks biting people seems to be this:

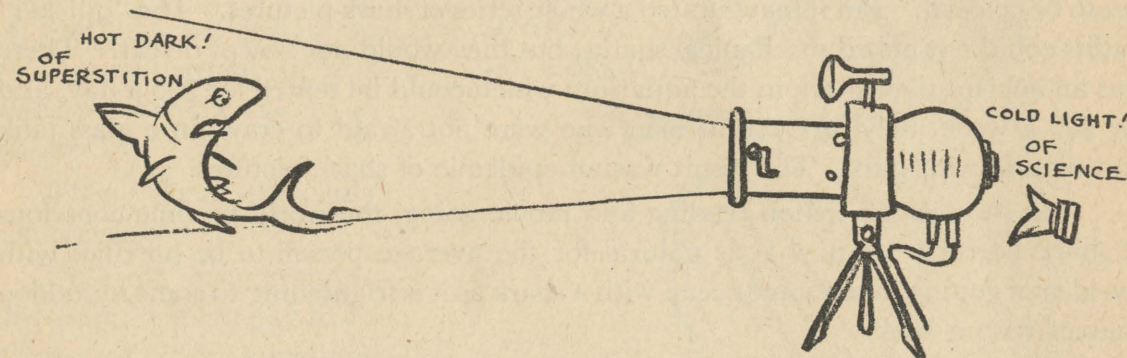
Like most other fish, the shark is a carnivorous, or meat-eating, animal. Ordinarily, he feeds on other fishes. Being a scavenger, he prefers them dead, and if not dead, badly wounded. If alive and healthy and not overly-courageous, he likes them small enough not to be able to put up much of a fight. But many a big fish, caught helplessly on a hook and being reeled in, has been attacked and partly eaten by a shark much smaller than the fish itself.

A giant ray can live for years without being molested by a shark. Drag the ray

aboard ship, chop off his barbed tail and heave him back into the water. In no time, the sharks will have him devoured.

The following extract from Technical Note No. 89-42 prepared by the Bureau of Medicine and Surgery ought to put to rest whatever latent fears you may have for sharks:

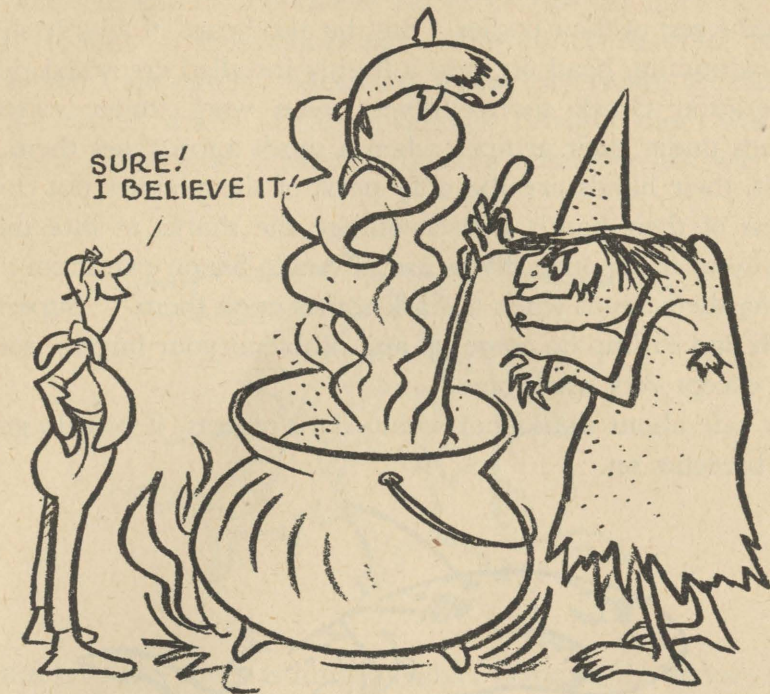
"All sharks are either scavenging or fish-eating in habit, although individuals may show departure from species characteristics. The sharks which may on occasion attack a man—the 'great white' and the 'tiger'—are relatively few in number. There are none dangerous to man found on the West coast. Consequently very few authentic cases of shark bite are recorded.



"Navy statistics compiled since 1923 show one case (in 1924) followed by recovery. No authenticating details are available. The Naval Medical Bulletin, established in 1907, contains reports of two cases (one in 1917, in the Philippines; one in 1921 in Haiti), in one of which the victim died. Further, the Public Health (Merchant Marine) Service has no record of any instance in the Merchant Marine. Thus a survey of available Navy records covering a number of years reveals only two, or perhaps three, authentic instances of shark bite, and none in the past 18 years—notwithstanding the extent of swimming from dock or ship in the Tropics.

"The shark is a wary fish, suspicious of noise, movement, and unfamiliar forms. Probably that trait alone would restrain a shark from attacking a swimming person. Another consideration is that, at the time when a number of men are thrown into the sea, there nearly always occur explosions and escape of fuel oil. The constituents of fuel oil, with or without flames, would probably serve as a repellant; and violent explosions, as of bombs, torpedoes, or depth charges, would stun, kill, or drive away all fish."

There are numerous superstitions about the sharks. Some seem to have a little basis in fact; others are pure hogwash. Among them are:



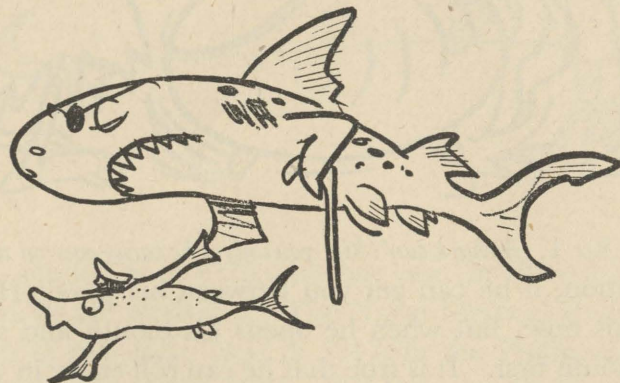
SUPERSTITION No. 1. *A shark can't bite you unless he turns over on his back.* A shark can bite from any position, if he can get you between his jaws. His mouth is situated somewhat under his nose, but when he opens his mouth and speeds forward for a strike, he arrives mouth first. It is true that he can roll easily in water. He can bank and turn as easily as an F6F. Except that he propels himself with his tail instead of with an engine in his nose, he maneuvers pretty much like an airplane. His dorsal fin is his stabilizer; his two pectoral fins act as elevators, ailerons, and brakes. But he attacks head first, with his mouth open, and when he opens his mouth, the whole front end of him is mouth.

SUPERSTITION No. 2. *A shark can't see any dark object.* There is some support for this legend, although it is not conclusive. There has long been a legend, often repeated by sailors returning from slave-running trips, that sharks will not attack a person of the Negro race. Dr. Louis Fuguier, in the *Ocean World* (published 1868), writes, "They (sharks) dearly love man. When several varieties of human food comes their way, they prefer Europeans to Asiatics, and both to the Negro."

Wallace Caswell, Jr., a professional shark killer, believes sharks cannot see dark objects. He points out West Indian Negroes, about to swim in shark-infested waters, take the precautions to blacken the palms of their hands and soles of their feet, which are lighter than the rest of their bodies. But, he also heard of a large shark knocking himself out by swimming, head on, into a freshly installed creosoted piling!

Second-generation Greek sponge divers, who work under water invariably thrust their hands under their armpits when a shark approaches them. Being in a black diving suit, their hands are the only parts of their bodies not covered. They believe whiteness of their hands will encourage the sharks to bite them. On the other hand, many of the sponge divers are of Anglo-Saxon extraction. They scorn the idea of hiding their hands when a shark comes upon them. "Superstition," they say. "Little fish and shrimp do come up and nibble at your fingers, sometimes, but never anything except very small ones."

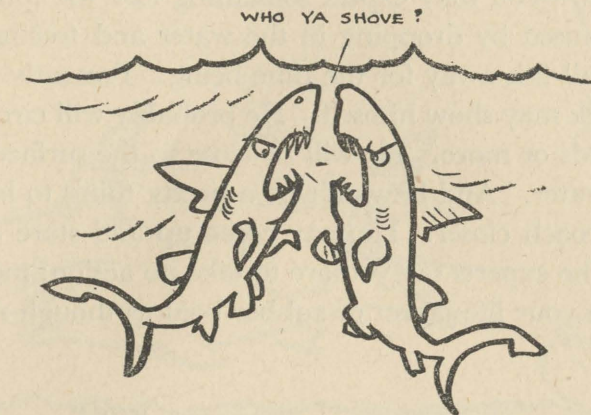
Just to play safe about sharks not seeing dark objects, if you do go down, keep your socks and breeches on.



SUPERSTITION NO. 3. *Big sharks are all blind, and are steered through the water by pilot fish.* One hundred percent wrong. In the first place, a blind shark would not last very long in the constant battle for life in the sea. All marine animals are equipped by nature for survival. When they lose one of their defensive faculties, some other animal is quick to take advantage of their misfortune, to get a meal.

The pilot fish does not, as is popularly supposed, pilot the shark. He merely attaches himself to the shark for rations. He feeds on the crumbs left by the shark. Nor is there any love or affection between the two. A shark will eat a pilot fish as quickly as he will any other kind of fish if he can get his jaws on him. The reason he doesn't eat the pilot fish is because the pilot fish swims and darts about much more rapidly than the shark can, and is safe from him because of that fact only.

SUPERSTITION NO. 4. *A shark won't eat another shark.* Wrong, but with some exceptions. Commercial shark fishermen usually set shark lines—a long line with buoy at each end and suspended and baited hooks at regular intervals between. Frequently sharks caught on these hooks have been gutted by other sharks before the fishermen can boat their catch. According to one fisherman, the cannibals only eat the liver of the fouled shark. Other fishermen thought there was some question about this point. All agreed, however, that the offending fish was a shark. They



pointed out the bite of a shark is unmistakable, being in the nature of an arc in the shape of a shark's mouth. They also pointed out that the attacks are made only after the shark has been hooked and is incapacitated either for flight or fight—a characteristic of his cowardly habits.

On the other side of the argument is the experience of shrimp fishermen along the Gulf coasts. Shrimp are caught in wide-mouth nets towed by small boats. These shrimp nets gather all manner of marine animals in addition to the shrimp. The pressure of the net as it is dragged through the water at 8 or 10 knots kills or stuns most of the fish caught in it.

When the haul is completed, the contents of the net are dumped on deck, the shrimp picked out, and the rest of the catch thrown overboard. Sharks, gulls, and buzzards quickly learn that by following a shrimp trawler they will be well fed from this waste.

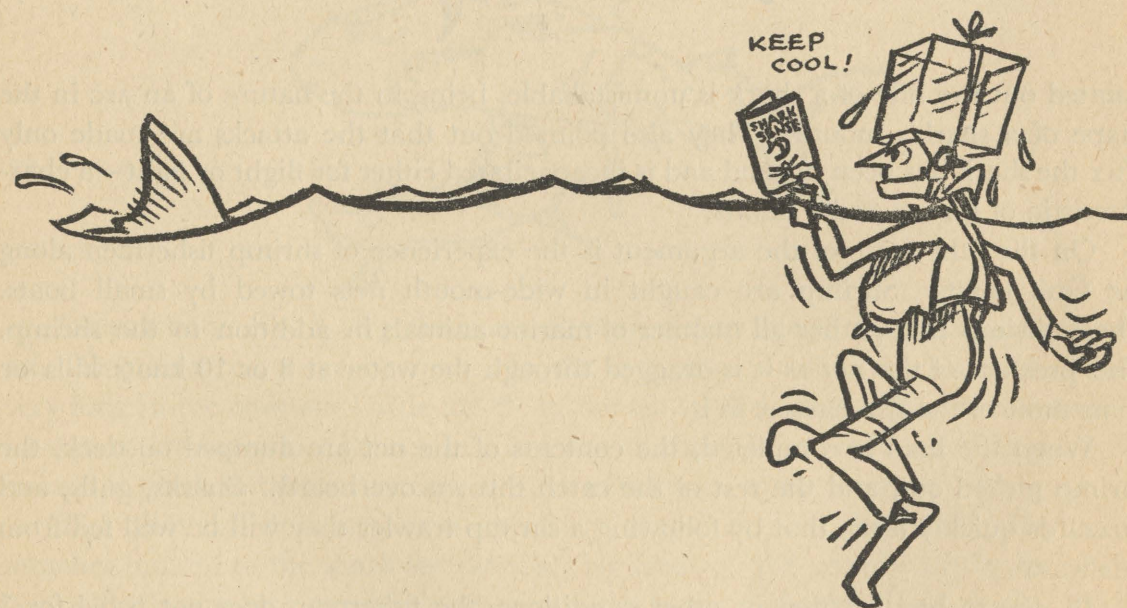
If, due to bad weather or other conditions, the fisherman does not trawl for 3 or 4 days, his net becomes "ripe"—with the odor of decayed fish. This attracts sharks. Frequently when a "ripe" net is put overboard, all the sharks in the vicinity go for it, generally tearing it to pieces.

To protect the net from dead-fish-hungry sharks, the shrimpers in some localities take the following precaution: They shoot or otherwise kill a small shark, cut him open and bleed him white. Then they lash the carcass of the shark to the forward floats on the net. This, they claim, keeps other sharks away until the net had been made "sweet" by being pulled through the water for an hour or more.

According to the preponderance of accumulated data and actual experience with sharks, a man forced down in tropical waters is justified in feeling reasonably safe from shark attacks. You may expect something like the following to happen:

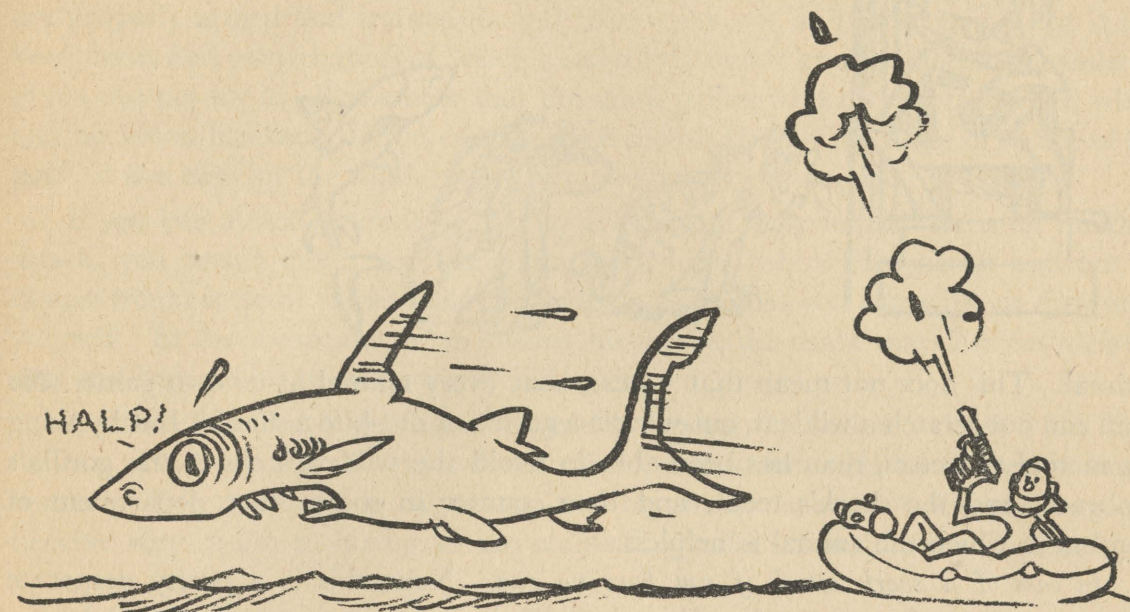
The commotion caused by dropping in the water and freeing your parachute, very likely, will scare all fish away for the time being. Presently—perhaps within a half hour or so—a shark may show himself. He probably will circle you a few times, at a distance of 50 yards or more. He will be close to the surface, and doubtless his dorsal fin will break water. And he won't be a pretty thing to look at.

Then he will approach closer. He may come up and stare at you from a distance of a few feet. The experts say you are to take no action; merely remain calm, and continue riding in your life jacket or rubber boat as though no shark were near



you. Keep moving, however. Don't let the shark mistake you for a corpse. Presently, they say, he will go on away.

If you have your pistol and can do so, a shot may be fired—but *not into the shark*. The noise of the explosion will frighten the shark away. If you shoot the shark,



even though you may kill him, there will be blood in the water, and blood always attracts all the sharks in the vicinity.

Needless to say, if you should be wounded, all shark men agree the safest thing to do is staunch the flow of blood as soon as you disengage the parachute. That action will be your best protection.

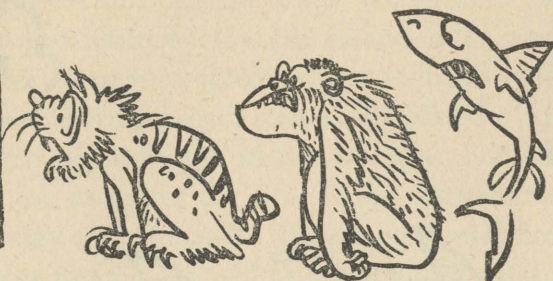
The idea of hitting a shark on the nose with your fist or whatever weapon you may have, has been tried—according to some sources with success. In the one case reported, the shark swam away, immediately. However, sponge fishermen, who carry a metal hook for removing sponges from their moorings on the bottom, purposely avoid striking sharks. "The shark is liable to wheel about and slap you with his tail," they point out. This is not a case of the shark fighting back; it merely is the case of a rapid exit.

If a big shark should attack you, you are not altogether helpless. Your most important defensive weapon in this case, is your human intelligence. Keep your wits about you, and think—and act—fast.

In spite of the fact that honey bees and step-ants seem to have their social existence

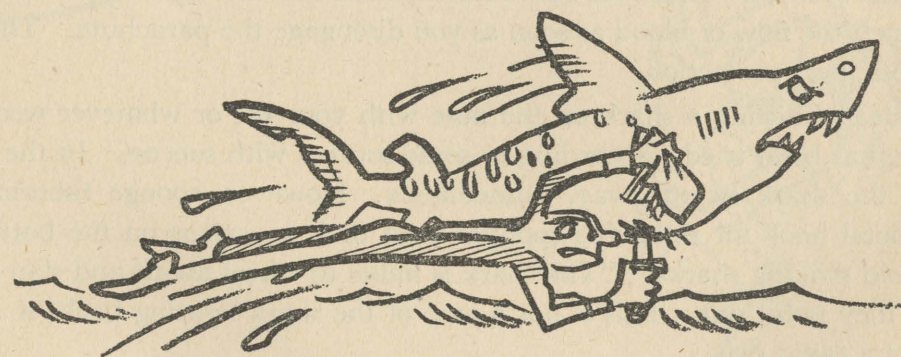


worked out more harmoniously than humans, man still is the he-coon of all the animals on land and sea. By using his brain, man has devised ways to conquer every



animal. This does not mean that he can beat every animal at its own game. No man can out-scratch a wildcat, out-wrestle a gorilla or out-bite a shark. But by using his mental processes, man has been able to avoid the wildcat's claws, the gorilla's embrace, and the shark's teeth, and then counter in some other department of combat in which the animal is helpless.

In case of a shark attack if you have no gun. Now, this is a pretty desperate countermeasure, but remember that your life-insurance company was not happy about you when you fell into the water. To repeat, in case of a shark attack in the water, swim out of the line of his charge, grab a pectoral fin as he goes by, and ride with him as long as you can hold your breath.



If you are fortunate enough to be armed with any kind of knife, and can get to it, cut the shark's belly open. A shark's hide is tough and it will be hard cutting, no matter how good your knife is, but the belly is the tenderest part of it. And, too, by opening the belly you let water inside which will kill him almost instantly.

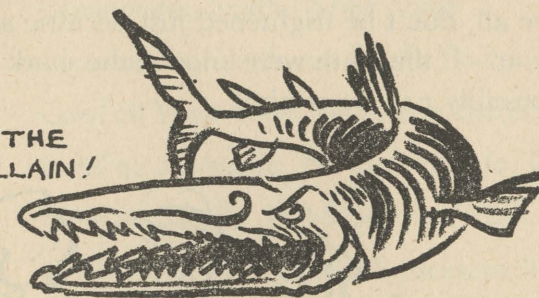
Killing the shark, naturally, will get blood in the water, and probably will attract other sharks to that spot. Get away from it as quickly as you can.

Admittedly your chances of whipping an excited shark in the water—unless you are properly armed and trained for just that—may not be 100 percent. But it has been done, and your chances of doing it and surviving are greater than they would be if you did not try it. Remember that the shark strikes with his mouth opened wide, and his vision blocked. If you can avoid his mouth by moving a foot or so out of his path, it is a miss for the shark, and a temporary reprieve for you.

If you can attach yourself to him by grabbing a fin, when he turns for another attack, you aren't there; you are riding with him, behind his mouth and out of danger from his teeth. Hold tight and hang on as long as you can without drowning yourself. In the meantime, after missing his target, the shark may lose his viciousness and become his usual cowardly self again.

Another fish that is getting a reputation among the fiction writers is the barracuda. He is a native of tropical and subtropical waters. He sometimes attains a length of 8 feet, is swift in the water, and reputedly vicious. A few years ago, it became very stylish to blame all the man-killing tales on the barracuda instead of

I'M THE
NEW VILLAIN!

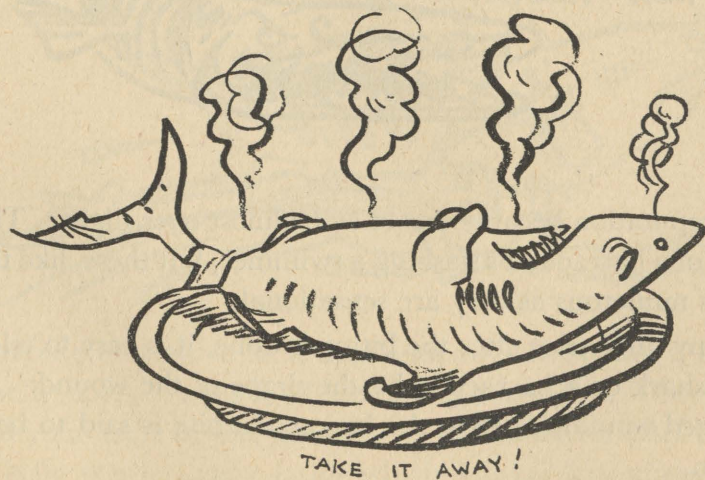


the shark. His reputation became one of evil, almost over night. There are authenticated instances of a barracuda's slashing a swimmer, but these, like the shark attacks, are not nearly as numerous as they are sensational.

If it makes any difference after the biting is done, it is easy to tell whether a man was bitten by a shark or a barracuda by the shape of the wound. A shark leaves a semicircular jagged wound, whereas the barracuda bite is said to be as straight as a surgeon's incision.

The thing to keep in mind is this:

- (1) There is very little danger from sharks.
- (2) People suffer more from shark fright than from shark bite.
- (3) Staunch a bleeding wound as soon as you are free from your parachute. This not only may prevent sharks from being attracted to you, but it may keep you from bleeding to death.
- (4) Keep your head while waiting to be picked up by rescue plane or boat. You can't win from a shark in a biting match, but you *can* win in a thinking match.
- (5) Don't believe anybody's shark stories, even if he can show you the ocean in which it happened. A shark is a fish, and a fish story quickly gets out of hand. All fish stories are not lies, but very few are ever handicapped by statistics.
- (6) If you are on a life raft instead of in a life jacket, don't dangle your bare feet overboard. A fish, and not necessarily a shark may mistake your toe for a feather spinner and chew it off.
- (7) And above all, don't be frightened just because a shark happens to be in the same ocean with you. If the truth were known, the shark probably is more frightened of you than you possibly can be of him.



EDITOR'S NOTE.—The above information has been obtained from a complete reading of all published material on sharks as well as consultation with shark and sponge fishermen throughout Florida. Discussions also were held with the Senior Ichthyologist of the Fish and Wildlife Service of the Department of the Interior, as well as the Chief Ichthyologist of the American Museum of Natural History, and other scientists. It becomes evident that few accurate facts are available regarding the habits of the shark. On the other hand, it is equally evident that the fear of sharks has originated because of wild and unfounded tales. The natural conclusion is that the shark offers no unusual hazards to a swimming or drifting man; in fact, the chances that a man will be attacked by a shark or barracuda are infinitesimal.

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