

= Tiger shark =

The tiger shark ( *Galeocerdo cuvier* ) is a species of requiem shark and the only extant member of the genus *Galeocerdo* . Commonly known as the " Sea Tiger " , the tiger shark is a relatively large macropredator , capable of attaining a length over 5 m ( 16 ft 5 in ) . It is found in many tropical and temperate waters , and it is especially common around central Pacific islands . Its name derives from the dark stripes down its body which resemble a tiger 's pattern , which fade as the shark matures .

The tiger shark is a solitary , mostly nocturnal hunter and is notable for having the widest food spectrum of all sharks , consuming a variety of prey ranging from crustaceans , fish , seals , birds , squid , turtles and sea snakes to dolphins and even other smaller sharks . The tiger shark has been known to eat inedible manmade objects that linger in its stomach , and it has a reputation as a " garbage eater " . While the tiger shark sits atop the food chain as an apex predator , killer whales have been known on occasion to prey on them . The tiger shark is considered a near threatened species due to finning and fishing by humans .

= = Taxonomy = =

The shark was first described by Peron and Lesueur in 1822 , and was given the name *Squalus cuvier* . Müller and Henle in 1837 renamed it *Galeocerdo tigrinus* . The genus , *Galeocerdo* , is derived from the Greek *galeos* , which means shark , and the Latin *cerdus* , the word for the hard hairs of pigs . It is often colloquially called the man @-@ eater shark .

The tiger shark is a member of the order *Carcharhiniformes* , the most species @-@ rich order of sharks , with more than 270 species also including the small catsharks and hammerhead sharks . Members of this order are characterized by the presence of a nictitating membrane over the eyes , two dorsal fins , an anal fin , and five gill slits . It is the largest member of the *Carcharhinidae* family , commonly referred to as requiem sharks . This family consists of mostly slender but powerful mid- to large @-@ sized sharks and includes some other well @-@ known sharks , such as the blue shark ( *Prionace glauca* ) , lemon shark ( *Negaprion brevirostris* ) , and bull shark ( *Carcharhinus leucas* ) .

= = Description = =

The tiger shark commonly attains a length of 3 @. @ 25 ? 4 @. @ 25 m ( 10 ft 8 in ? 13 ft 11 in ) and weighs around 385 ? 635 kg ( 849 ? 1 @, @ 400 lb ) . Sometimes , an exceptionally large male tiger shark can grow up to 4 m ( 13 ft 1 in ) . Females are larger , and exceptionally big ones can reportedly measure over 5 m ( 16 ft 5 in ) . One female specimen caught off Australia reportedly measured 5 @. @ 5 m ( 18 ft 1 in ) long and weighed an exceptional 1 @, @ 524 kg ( 3 @, @ 360 lb ) , although her weight is thought to have been bolstered by her pregnant state at the time . Even larger specimens have been reported , but are unconfirmed .

Among the largest extant sharks , the tiger shark ranks in average size only behind the whale shark ( *Rhincodon typus* ) , the basking shark ( *Cetorhinus maximus* ) and the great white shark ( *Carcharodon carcharias* ) . Some other species such as megamouth sharks ( *Megachasma pelagios* ) , Pacific sleeper sharks ( *Somniosus pacificus* ) , Greenland sharks ( *Somniosus microcephalus* ) and bluntnose sixgill sharks ( *Hexanchus griseus* ) broadly overlap in size with the tiger shark , but as these species are comparatively poorly studied , it is unclear whether their typical mature size matches that of the tiger shark . The great hammerhead ( *Sphyrna mokarran* ) , a member of the same taxonomic order as the tiger shark , has a similar or even greater average body length but is lighter and less bulky , with a maximum known weight of 580 kg ( 1 @, @ 280 lb ) .

Its teeth are specialized to slice through flesh , bone , and other tough substances such as turtle shells . Like most sharks , its teeth are continually replaced by rows of new teeth .

= = = Skin = = =

The skin of a tiger shark can typically range from blue to light green with a white or light @-@ yellow underbelly . The advantage of this is that when it is hunting for its prey , when prey looks at the shark from above , the shark will be camouflaged since the water below is darker . And when prey is below the shark and looks up , of course because of the sun , it is lighter so that the light underbelly will also camouflage the shark . This is known as countershading . Dark spots and stripes are most visible in young sharks and fade as the shark matures . Its head is somewhat wedge @-@ shaped , which makes it easy to turn quickly to one side . They have small pits on the snout which hold electroreceptors called the ampullae of Lorenzini , which enable them to detect electric fields , including the weak electrical impulses generated by prey , which helps them to hunt . Tiger sharks also have a sensory organ called a lateral line which extends on their flanks down most of the length of their sides . The primary role of this structure is to detect minute vibrations in the water . These adaptations allow the tiger shark to hunt in darkness and detect hidden prey .

= = = Vision = = =

A reflective layer behind the tiger shark 's retina , called the tapetum lucidum , allows light @-@ sensing cells a second chance to capture photons of visible light , enhancing vision in low light conditions . A tiger shark generally has long fins to provide lift as the shark maneuvers through water , while the long upper tail provides bursts of speed . Tiger sharks normally swim using small body movements . Its high back and dorsal fin act as a pivot , allowing it to spin quickly on its axis , though the shark 's dorsal fins are distinctively close to its tail .

= = Distribution and habitat = =

The tiger shark is often found close to the coast , mainly in tropical and subtropical waters throughout the world . Its behavior is primarily nomadic , but is guided by warmer currents , and it stays closer to the equator throughout the colder months . It tends to stay in deep waters that line reefs , but it does move into channels to pursue prey in shallower waters . In the western Pacific Ocean , the shark has been found as far north as Japan and as far south as New Zealand . A tiger shark tagged in the Caribbean has been tracked migrating to Cape Cod ; although they are a tropical species , the warm Gulf Stream brings the coast of Cape Cod to within the extreme north of its range during the summer .

Tiger sharks can be seen in the Gulf of Mexico , North American beaches , and parts of South America . It is also commonly known in the Caribbean Sea . Other locations where tiger sharks are seen include off Africa , China , Hong Kong , India , Australia , and Indonesia .

Certain tiger sharks have been recorded at depths just shy of 900 m ( 3 @,@ 000 ft ) , but some sources claim they move into shallow water normally thought to be too shallow for a species of its size . A recent study showed the average tiger shark would be recorded at 350 m ( 1 @,@ 100 ft ) , making it uncommon to see tiger sharks in shallow water . However , tiger sharks in Hawaii have been observed in depths as shallow as 3 m ( 10 ft ) and regularly observed in coastal waters at depths of 6 to 12 m ( 20 to 40 ft ) .

= = Feeding = =

The tiger shark is an apex predator and has a reputation for eating anything . Young tiger sharks are found to prey largely on small fish , as well as various small jellyfish , cephalopods , and other mollusks . Around the time they attain 2 @.@ 3 m ( 7 @.@ 5 ft ) , or near sexual maturity , their prey selection expands considerably , and much larger animals become regular prey . Numerous fish , crustaceans , sea birds , sea snakes , marine mammals ( e.g. bottlenose dolphins ( Tursiops ) , common dolphins ( Delphinus ) , spotted dolphins ( Stenella ) , dugongs ( Dugong dugon ) , seals and sea lions ) , and sea turtles ( including the three largest species : the leatherback ( Dermochelys coriacea ) , the loggerhead ( Caretta caretta ) and the green sea turtles ( Chelonia mydas ) , ) are regularly eaten by adult tiger sharks . The tiger shark also eats other sharks ( including adult

sandbar sharks ( *Carcharhinus plumbeus* ) , as well as rays , and will sometimes even eat other tiger sharks .

Due to high risk of predatory attacks , dolphins often avoid regions inhabited by tiger sharks . Tiger sharks may also attack injured or ailing whales and prey upon them . A group was documented attacking and killing an ailing humpback whale ( *Megaptera novaeangliae* ) in 2006 near Hawaii . The tiger shark also scavenges on dead whales . In one such documented incident , they were observed scavenging on a whale carcass alongside great white sharks .

Evidence of dugong predation was identified in one study that found dugong tissue in 15 of 85 tiger sharks caught off the Australian coast . Additionally , examination of adult dugongs has shown scars from failed shark attacks . Finally , dugong microhabitats shift similarly to those of known tiger shark prey when the sharks are abundant .

The broad , heavily calcified jaws and nearly terminal mouth , combined with robust , serrated teeth , enable the tiger shark to take on these large prey . In addition , excellent eyesight and acute sense of smell enable it to react to faint traces of blood and follow them to the source . The ability to pick up low @-@ frequency pressure waves enables the shark to advance towards an animal with confidence , even in murky water . The shark circles its prey and studies it by prodding it with its snout . When attacking , the shark often eats its prey whole , although larger prey are often eaten in gradual large bites and finished over time .

Notably , terrestrial mammals , including horses ( *Equus ferus caballus* ) , goats ( *Capra aegagrus hircus* ) , sheep ( *Ovis aries* ) , dogs ( *Canis lupus familiaris* ) , cats ( *Felis catus* ) , brown rats ( *Rattus norvegicus* ) , are fairly common in the stomach contents of tiger sharks around the coasts of Hawaii . In one case , remains of two flying @-@ foxes were found in stomach of this shark . Because of its aggressive and indiscriminate feeding style , it often mistakenly eats inedible objects , such as automobile license plates , oil cans , tires , and baseballs .

= = = Swimming efficiency and stealth = = =

All tiger sharks generally swim slowly , which , combined with cryptic coloration , may make them difficult for prey to detect them in some habitats . They are especially well camouflaged against dark backgrounds . Despite their sluggish appearance , tiger sharks are one of the strongest swimmers of the carcharhinid sharks . Once the shark has come close , a speed burst allows it to reach the intended prey before it can escape .

= = Reproduction = =

Males reach sexual maturity at 2 @. @ 3 to 2 @. @ 9 m ( 7 @. @ 5 to 9 @. @ 5 ft ) and females at 2 @. @ 5 to 3 @. @ 5 m ( 8 @. @ 2 to 11 @. @ 5 ft ) . Females mate once every three years . They breed by internal fertilization . The male inserts one of his claspers into the female 's genital opening ( cloaca ) , acting as a guide for the sperm . The male uses his teeth to hold the female still during the procedure , often causing the female considerable discomfort . Mating in the Northern Hemisphere generally takes place between March and May , with birth between April and June the following year . In the Southern Hemisphere , mating takes place in November , December , or early January . The tiger shark is the only species in its family that is ovoviviparous ; its eggs hatch internally and the young are born live when fully developed .

The young develop inside the mother 's body for up to 16 months . Litters range from 10 to 80 pups . A newborn is generally 51 to 76 cm ( 20 to 30 in ) long . This shark typically reaches maturity at lengths of 2 to 3 m ( 6 @. @ 6 to 9 @. @ 8 ft ) . It is unknown how long tiger sharks live , but they can live longer than 12 years .

= = Conservation = =

The tiger shark is captured and killed for its fins , flesh , and liver . It is caught regularly in target and nontarget fisheries . Several populations have declined where they have been heavily fished .

Continued demand for fins may result in further declines in the future . Tiger sharks are considered a near threatened species due to excessive finning and fishing by humans according to International Union for Conservation of Nature .

While shark fin has very few nutrients , shark liver has a high concentration of vitamin A which is used in the production of vitamin oils . In addition , the tiger shark is captured and killed for its distinct skin , as well as by big @-@ game fishers .

In 2010 , Greenpeace International added the tiger shark to its seafood red list , which is a list of fish commonly sold around the world , and which have a very high risk of being sourced from unsustainable fisheries .

= = Relationship with humans = =

Although it is very rare for sharks to bite humans , the tiger shark is reported to be responsible for a large percentage of fatal shark attacks , and is sometimes regarded as one of the most dangerous shark species . They often visit shallow reefs , harbors , and canals , creating the potential for encounter with humans . The tiger shark also dwells in river mouths and other runoff @-@ rich water . While the tiger shark is considered to be one of the sharks most dangerous to humans , its bite rate is low . The tiger is second on the list of number of recorded bites on humans , with the great white shark being first . On average , three to four shark bites occur per year in Hawaii , but they are rarely fatal . This bite rate is very low considering thousands of people swim , surf , and dive in Hawaiian waters every day . Human interactions with tiger sharks in Hawaiian waters have been shown to increase between September and November , when tiger shark females are believed to migrate to the islands to give birth .

Between 1959 and 2000 , 4 @, @ 668 tiger sharks were culled in an effort to protect the tourism industry . These efforts , despite damaging the shark population , were shown to be ineffective in decreasing the number of interactions between humans and tiger sharks . It is illegal to feed sharks in Hawaii ( except for traditional Hawaiian cultural or religious practices ) , and interaction with them , such as cage diving , is discouraged . South African shark behaviorist and shark diver Mark Addison demonstrated divers could interact and dive with them outside of a shark cage in a 2007 Discovery Channel special , and underwater photographer Fiona Ayerst swam with them in the Bahamas .

= = Mythology = =

The tiger shark is considered to be sacred na ?aumakua ( ancestor spirits ) by some native Hawaiians who think their eyeballs have special powers of visual perception . This aligns with the general known facts about sharks and their highly developed senses .