# Evaluation Biological of Cartilaginous Fish in Persian Gulf

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**Abstract:** Persian Gulf of biodiversity is very rich. Some of the aquatic area, rare are and they protected. Accurate information about All Species This Sea is not available .Determination Biodiversity Persian Gulf, First Step In recognition of this ecosystem is the marine research field overview and a detailed database about the Persian Gulf Provides. The biological properties of deep sea cartilaginous fish and living areas have always been. Unfortunately, information about They little is known. However, several species in the Persian Gulf Cartilaginous fish are. The most important types are flounder and shark.

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## 1. Introduction

Persian Gulf is a shallow sea. Its area of 233 000 square kilometers and its average depth is about 25 meters. Persian Gulf with the important features of the habitat is considered (4). Habitat diversity in the Persian Gulf, it is the presence of several species (14). Nutritional properties of fish meat and increasing population, the consumption of these resources is greater. For example, per capita fish were consumed in some countries to reach 20 kg in year 1.

Persian Gulf is divided into two categories of fish, cartilaginous fish and bony fish. With a full cartilaginous fish vertebra, jaw and movable appendages are physical pairs (2). Cartilaginous fishes have a life cycle characteristics. For example, high longevity, slow growth, late maturity, low egg count and long parental care.

Cartilaginous fish recipes today represent the diversity of the four categories. However, the details of this classification are still debated. Places of cartilaginous fish scales are covered. These scales have teeth that are left behind. Is one or two bumps, why call them skin teeth (7). Sharks are fish without a swim bladder and liver instead of fat, are used to create fluidity (17). The respiratory system of cartilaginous fishes is spiracle. These components are used to bring water into the gill cavity. Sharks teeth are numerous and it evolved to defend them and feed use. Fish in the flounder and rat, teeth form in the wide screens have been used for crushing mollusks (5).

Cartilaginous fish have sensory devices are highly developed. Ampoule of lurenzinii injection nozzle is located on the shark's sensory system is important. The reproduction of cartilaginous fish hatchery to intermediate stages of birth and is variable (7). Some cartilaginous fish are important in the fisheries industry. Eat shark meat in many countries. Shark dorsal fin soup and some kind of adhesive used. Sharks also have skin tanning, leather is prepared. Rich in vitamins A and D from shark liver oil are produced (17). Of shark fins and tail are drugs that are useful to humans.

## 2. Shark Persian Gulf

Biology of Sharks and carnivore species are predatory. The most important families in the Persian Gulf and Oman Sea waters are seen include:

*Family: Lamnidae*
*English Name: Mackerel shark*
*Persian name: White Shark (9)*

Spindle-shaped body, mouth, and with the lower row of teeth are sharp. Arcs have five gill opening. They can be seen on the caudal two small fins. Some species of this family have Spiracle hole. White shark most dangerous sharks in the world, belongs to this family. They are viviparous and oviparous (17). Behind them is a grayish blue color. It quickly swimmers and are voracious predators.
The Iranian species: Isurus oxyrinchus (Rafinesque, 1810), or wild shark, 400 cm long, typically 270 cm (7). Shark meat fresh, frozen and dry salt is used (9).

*Family: Triakidae*
*English name: Hound shark*
*Persian name: shark hunting (11)*

Maximum length is 150 meters to the sharks. Have two dorsal fins. The latter is slightly smaller than the first ballet. Underside of the mouth and is equipped with sharp teeth, of aquatic invertebrates and fish to feed. The second dorsal fin is larger than anal fin. Pectoral fin is ahead of the first dorsal fin. Have a third eyelid; the hole is small Spiracle (17) and Live at sea, rarely seen in fresh water.

**Species related to Iran**

*Iago omanesis (Norman, 1939):*

Male 37 and female 58 cm length, swing 2195-110 m depth, is a marine fish. Spent in sea water

*Hypogaleus hyugaensis: (Miyosi, 1939)*

Over 127 male and female is 122 cm. Macro benthic and in deep water to take over. 230-40 m depth range and enjoy a bit of important fisheries (7).

*Family: Sphyridae*

*English Name: Hammer head and bonnet head sharks*

*Persian name: hammer head shark*

Profile: Maximum length of this shark is 420 cm. Eyes and nostrils are located on both sides of the hammer. These sharks are viviparous. The first dorsal fin, second dorsal fin is much larger. Is a row of jagged teeth, Do not have a third eyelid Spiracle (17). The hammerhead shark habitat in areas of surface water is warm. Small sharks are seen in the waters of the coast, although most of them are feeding close to shore (7). The meat fresh, frozen, smoked and salt is consumed, the liver oil they used to receive vitamin A (9).

*Sphyrna lewiniEusphyrna blochii (Cuvier, 1817):*

(Wing head sharks); length 186 cm; is Macrobenthic. In brackish and marine waters to take over, there are important fisheries. This species can be seen throughout the Persian Gulf and Oman Sea.

*Sphyrna lewini (Cuvier, Griffith and Smith, 1843):*

(Scalloped hummer head); length and weight is 430 cm and 4.152 kg respectively. In brackish and marine waters to take over, is associated with coral reefs and fisheries are important. The eastern section of the Oman Sea and Persian Gulf had to take over. (Ruppell.1837)

*Sphyrna mokarran*: large hammer head sharks and 449.5 cm long and weighs 610 kg, respectively. In brackish and marine waters had to take over. There are important fisheries.

*Family: Carcharhinidae*

*English Name: Requiem sharks*

*Persian name: shark predator*

Profile: Maximum length of this shark is 500 cm. Pupil is circular. Spiracle are no holes, Underside mouth with sharp teeth and a row. The dorsal fins, anal and abdominal free. The tail fin can be seen at the beginning of recess. Fins are usually edged with dark spots. There are five pairs of gill slit in the head (17). The family with 5 genera and 12 species, the largest family of the Persian Gulf and Oman Sea make up shark (7). In some species the meat is delicious and fresh, frozen and dried salt is consumed. The shark liver oil and fins are also making good soup.

**Species related to Iran**

1. *Carcharhinus dussumier: chin white shark most dangerous sharks Persian Gulf (10). Length 100 cm is distributed throughout the Persian Gulf and Oman Sea.*
2. *Carcharhinus lewcas: dog fish, only freshwater species of shark that is Iran. Karun River rises to 125 km. The distribution of the Tigris, Euphrates and Karun is.*
3. *Carcarhinus limbatus: black tip shark. Distribution in the Persian Gulf and Oman Sea is west. There are important fisheries.*
4. *Carcharhinus maeloti: shark sharp distribution is in the Persian Gulf and Oman Sea.*
5. *Carcharhinus plumbeus: Bound sand sharks, there are important fisheries. Distribution in the Persian Gulf and Oman Sea is the eastern sector.*
6. *Carcharhinus sorrah: shark fin white; distribution of waters in the Persian Gulf and Chabahar*
7. *Carcharhinus cuvier: Tiger Shark; distribution across the Persian Gulf and Oman Sea.*
8. *Rhizoprionodon acutus Chuck shark lips; distribution in the Persian Gulf and Oman Sea's northern coast.*
9. *Rhizoprionodon oligolinx: sharp nose gray shark, the importance of the fisheries. Distribution of the Iranian coast in the Persian Gulf and Oman Sea (7).*

*Family: Hemigaleida*

*English Name: Weasel sharks, hook tooth sharks*

*Persian name: the mysterious shark (9)*

***Specifications*:** Maximum length to 2 M is. Upper tail fin has a higher growth Is. So Because They are called long tail of the shark. The first dorsal fin of the second dorsal fin is much larger. Pectoral fins are very large. The size of the second dorsal fin with spines: The body color is grayish brown (17), Very active, strong and swimmers.

**The Iranian species: Alopias pelagicus: Sharks long tail; Length 330 Cm**
*Family: H emiscyllidae (Orectolobidae)*
*English name: Bambo sharks*
*Persian name: Shark catfish (11)*

***Specifications:*** Maximum size of this shark is 240 cm. The second dorsal fin, first dorsal fin is two-thirds. There are dimples in the tail fin, anal fin smaller than second dorsal fin. Finally, the dorsal fin and the reproductive organs become deformed. These sharks are viviparous. And the underside is ridged mouth with teeth (17). Galyydh Hemi sharks, sharks and coral reefs are a small family. Small to medium size and in the waters of the Indian Ocean and West Pacific, are on the continental shelf. With little variation (approximately 5 species) are.

**Species related to Iran**

1. *Chaenogaleus macrostomus*: shark tooth hooks, body length 100 cm; distribution across the Persian Gulf and Oman Sea (7).
   *Family: Alopiidae English*
   *Name: Thresher sharks*
   *Persian name: Sea Fox (11)*
   ***Profile:*** maximum length is 2 m. Upper tail fin is more developed, why they are called long tail of the shark. The first dorsal fin is much larger than second dorsal fin. Pectoral fins are very large. The second dorsal fin and anal fin is the same size. The body color is grayish brown (17). Fish are very active and strong swimmers.

2. *Alopias pelagicus:* Shark tail length, length 330 cm
   *Family: Hemiscyllidae (Orectolobidae) English Name: Bambo sharks Persian name: shark catfish (11)*
   ***Specifications:*** Maximum size of this shark is 105 cm. Spiracle holes the same size in this species is the eyes. Two fin dorsal are almost the same size. Tail fin is almost flat. Anal fin to the tail fin is attached. Pelvic fins in front of first dorsal fin are located. Have a mustache. No teeth are sharp. These sharks are Macro benthic eat aquatic invertebrates (17).

**Profile:** The length of this shark comes up to 18 meters. They usually swim near the water surface. From the plankton they eat, Teeth as a string. Gill has large gaps. Big mouth is terminal. Abdominal and anal fins are small (17). Warm water in large areas of the world is vast. Liver oil is used to obtain (9).

Species related to Iran
Rhincodon typus: shark is a giant. There is five gill slit on the head. Is the upper caudal indentation (7).

**Turbot Persian Gulf**

The body is gone. Dorsal surface of the abdominal surface are compressed. These fish are in the front of the head with a muzzle. Not shield the fish head (17). Usually a thin tail and seem appendage. No anal fin. There are no dorsal fins and their development is poor, usually on the tail fins are located. Tail fins have poor growth. Bottom width of the mouth and the head is located. Nostrils are located underneath the head. Branchy are gaps in the lower head. Spiracle holes are very large (3). Turbot in Iran in the Persian Gulf and Oman Sea live. Some rays of the Persian Gulf and Oman Sea, include:
*Family: Pristidae*
*English name: Saw fishes*
*Persian Name: dogfish (11)*

**Profile:** maximum length of this species reaches 370 cm. Have an elongated snout. The parties are in the teeth. Spiracle holes are located behind the eyes. The body front bumper and rear body of fish is shark-like fishes. Macro benthic organisms are fed (17).

**Species related to Iran**
***Pristis cuspidatus:*** spotted dogfish, maximum body length 600 cm, body and elongated spindle-shaped, saw more than 22 teeth in a row are (9).
Family: Dasyatidae
English name: Sting rays, Whip rays
Persian name: Po Fish (9).

Profile: The majority of the physical page width is 180 cm. These fish are Macro benthic. Live in coastal areas. Large pectoral fins are attached to the ventral fins. No tail fins. Caudal end is sharp. A spur on the caudal are dangerous. Lower your mouth and teeth with a cupola (17).

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