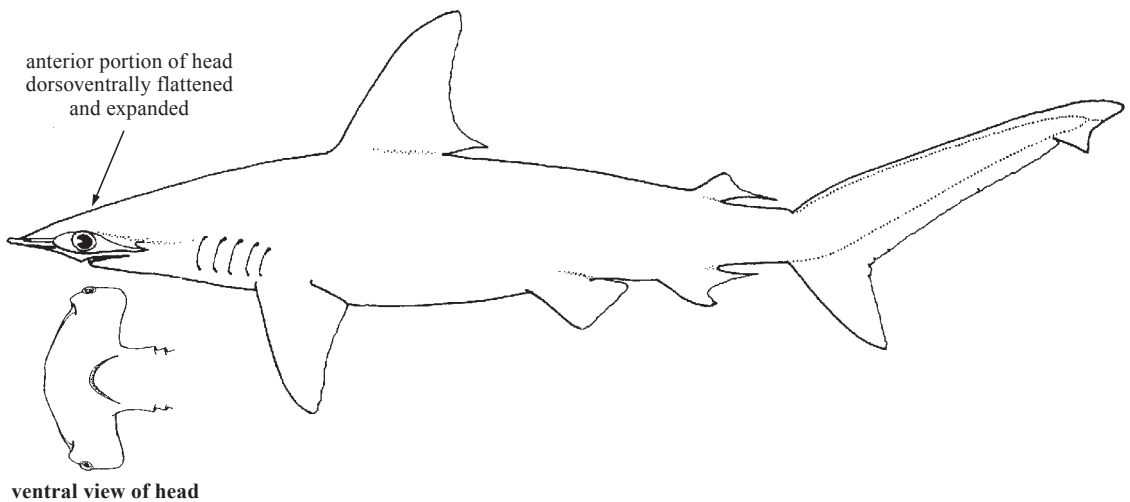


## SPHYRNIDAE

## Hammerhead and bonnethead sharks

**Diagnostic characters:** Small- to large-sized sharks. Body elongate and moderately slender, cylindrical or somewhat compressed. **Anterior portion of head much flattened dorsoventrally and widely expanded laterally in hammer or shovel form, with the eyes at its outer edges;** eyes with well-developed internal nictitating lower eyelids; anterolateral teeth blade-like, with a single cusp; posterior teeth similar to anterolateral teeth or modified into keeled, molariform crushing teeth without cusps. Two dorsal fins, **the first dorsal fin high and pointed, its base much shorter than caudal fin and wholly anterior to origins of pelvic fins;** second dorsal and anal fins much smaller than the first dorsal fin and either equal-sized or with the anal fin somewhat larger than the second dorsal fin; caudal fin much less than half of total length and strongly asymmetrical, with a well-marked subterminal notch and a small, but well-defined ventral lobe. Caudal peduncle slightly compressed, not strongly flattened dorsoventrally or widely expanded laterally, without lateral keels but with upper and lower precaudal pits present. **Intestine with a scroll valve.** **Colour:** back predominantly grey or brassy, sometimes yellow or very dark grey, no prominent markings except dark fin tips in young of some species; underside white or light grey.



**Habitat, biology, and fisheries:** Hammerhead sharks inhabit all tropical and warm-temperate seas, from the surface, surf-line, and intertidal down to at least 275 m in waters near continents, continental islands, and oceanic islands. Small species are confined to coastal continental waters; juveniles of large species are coastal off continents and islands, while adults are primarily semi-oceanic although they often approach coasts in search of food. All species are viviparous (placental viviparous, with a yolk-sac placenta), and have 4 to 42 young per litter. Hammerheads feed on a wide variety of bony fishes, other sharks (including batoids), cephalopods (squids, octopi, and cuttlefish), gastropods, bivalves, and crustaceans (shrimp, mantis shrimp, brachyurid crabs, lobsters, barnacles, and isopods), but do not feed on marine mammals or other very large marine vertebrates. Hammerhead sharks are important for fisheries in the area and are used as food and also for the preparation of various subproducts, especially Vitamin A from the liver and fins for the oriental soupfin market. A few species have been reported to occasionally bite people, but large species are generally timid when approached by divers. Hammerheads (particularly *Sphyrna lewini* and *S. mokarran*) are popular subjects for ecotouristic diving worldwide and are viewed by divers in Area 31. *Sphyrna lewini* and *S. tiburo* are popular fish for large public aquaria, including a number of aquaria along the eastern and Gulf coast of the USA. The conservation status of hammerheads is problematical because of heavy bycatch and targeted fisheries that catch them wherever they occur (including fisheries on nursery grounds which may be decimating the young), the high value of their fins (particularly from large species), their vulnerability to gill nets because of their head-shape (which helps to snare them in net-meshes), the high activity level of some species which means that they perish quickly when caught in nets or on longlines, and often poor or nonexistent species-specific or even family-specific fisheries statistics for most species. Catches of large hammerheads (*S. lewini*, *S. mokarran*) have declined markedly off the USA in Area 31, and catches are now regulated in USA waters.

**Similar families occurring in the area**

No other shark family has the characteristic hammer- or shovel-shaped head of the Sphyrnidae.

**Key to the species of Sphyrnidae occurring in the area**

- 1a. Head shovel-shaped and narrow, its width usually less than 3 times the preoral length (Fig. 1); posterior teeth formed as broad, keeled, molariform crushers . . . . . *Sphyrna tiburo*
- 1b. Head hammer- or mallet-shaped and wider, its width over 3 times the preoral length (Fig. 2); posterior teeth not molariform crushers . . . . . → 2

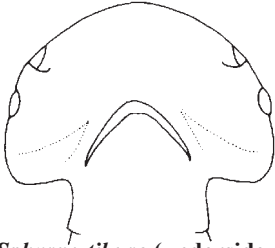


Fig. 1 *Sphyrna tiburo* (underside of head)

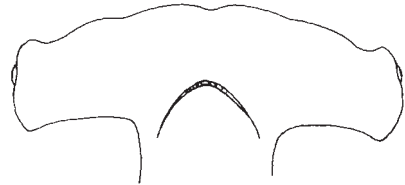


Fig. 2 *Sphyrna lewini* (underside of head)

- 2a. Free rear tip of first dorsal fin over or posterior to pelvic fin-origins (Fig. 3); posterior margin of anal fin straight or weakly concave; size smaller, adults less than 2 m . . . . . → 3
- 2b. Free rear tip of first dorsal fin well ahead of pelvic-fin origins (Fig. 4); posterior margin of anal fin deeply notched; size larger, adults to 3 m or more . . . . . → 4

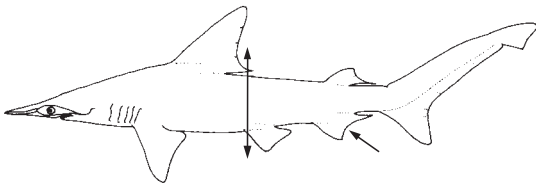


Fig. 3 *Sphyrna tudes*

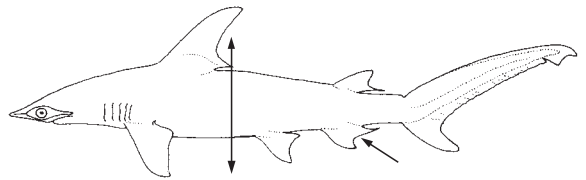


Fig. 4 *Sphyrna mokarran*

- 3a. Prenarial grooves well developed; head broader, with a well-developed medial indentation on snout (Fig. 5) . . . . . *Sphyrna tudes*
- 3b. Prenarial grooves poorly developed; head narrower, without a strong medial indentation on snout (Fig. 6) . . . . . *Sphyrna media*

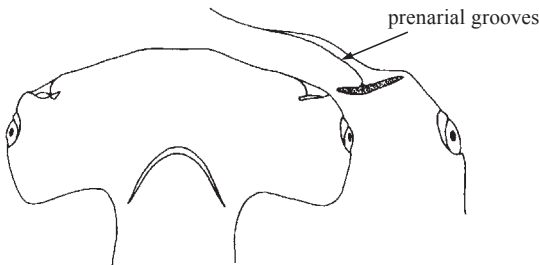


Fig. 5 underside of head (*Sphyrna tudes*)

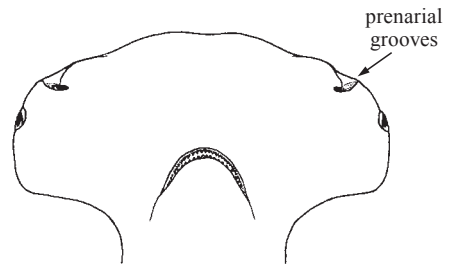


Fig. 6 underside of head (*Sphyrna media*)

- 4a. Anterior margin of head nearly straight in adults, moderately convex in young; prenarial grooves hardly developed; teeth strongly serrated at all sizes; first dorsal fin markedly falcate; second dorsal about a third as high as first dorsal fin, with a short inner margin; posterior margins of second dorsal and pelvic fins deeply concave (Fig. 4) . . . . . *Sphyrna mokarran*
- 4b. Anterior margin of head moderately convex in adults, strongly so in young; prenarial grooves well developed; teeth smooth in young, weakly serrated in large individuals; first dorsal fin erect or slightly falcate; second dorsal-fin less than a third the height of first dorsal fin, with a long inner margin; posterior margins of second dorsal and pelvic fins slightly concave to nearly straight . . . . . → 5
- 5a. Median indentation present on anterior margin of head; free rear tip of second dorsal fin nearly reaching upper caudal-fin origin; anal-fin base noticeably larger than that of second dorsal fin (Fig. 7). . . . . *Sphyrna lewini*
- 5b. Median indentation absent from anterior margin of head; free rear tip of second dorsal fin well ahead of upper caudal-fin origin; anal-fin base about as large as that of second dorsal fin (Fig. 8). . . . . *Sphyrna zygaena*

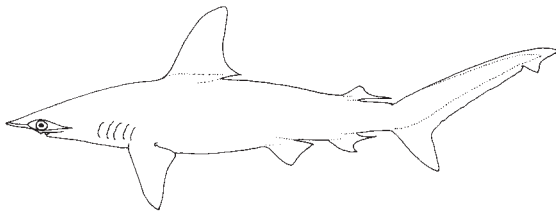


Fig. 7 *Sphyrna lewini*

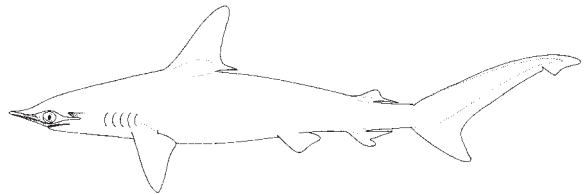


Fig. 8 *Sphyrna zygaena*

**List of species occurring in the area**

The symbol is given when species accounts are included.

- Sphyrna lewini* (Griffith and Smith, 1834).
- Sphyrna media* Springer, 1940.
- Sphyrna mokarran* (Rüppell, 1837).
- Sphyrna tiburo* (Linnaeus, 1758).
- Sphyrna tudes* (Valenciennes, 1822).
- Sphyrna zygaena* (Linnaeus, 1758).

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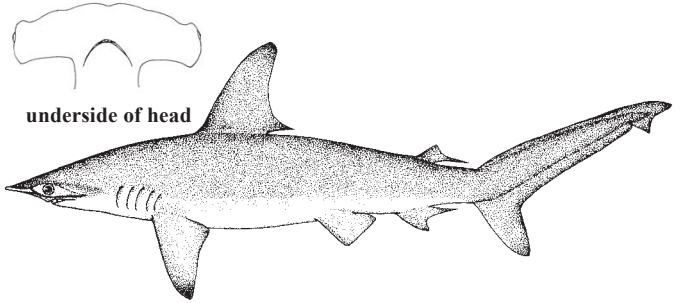
***Sphyrna lewini*** (Griffith and Smith, 1834)

SPL

**Frequent synonyms / misidentifications:** *Sphyrna diplana* Springer, 1941 / *Sphyrna mokarran* (Rüppell, 1837), *Sphyrna zygaena* (Linnaeus, 1758).

**FAO names:** En - Scalloped hammerhead; Fr - Requin-marteau halicorne; Sp - Cornuda común.

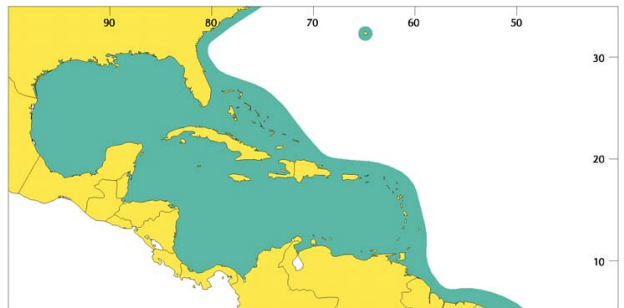
**Diagnostic characters:** Body elongate and laterally compressed. **Head hammer-shaped, its anterior contour broadly arched in young, but moderately arched in adults, with a shallow but distinct indentation at the midline and a deep rounded depression opposite each nostril; lateral expansions of head very prominent, broad transversely and narrow from front to back; eyes large, their horizontal diameter almost equal to length of shortest (fifth) gill slit, posterior margins of eyes slightly posterior to or nearly opposite front of mouth; nostrils with strong prenarial grooves;** mouth broadly arched, with small labial furrows on lower jaw only; corners of mouth about opposite outer corners of head; teeth triangular, deeply notched posteriorly, usually with smooth-edged cusps (sometimes slightly serrate in large individuals), mostly cuspidate, not keeled and molariform. Fifth gill slit shorter than the four preceding ones, and located posterior to pectoral-fin origins. First dorsal fin high and moderately falcate, with its origin above or just behind level of pectoral-fin insertions, its free rear tip not very slender and ending well anterior to pelvic-fin origins, and its inner margin about one third the length of the fin-base; free rear tip of first dorsal fin well anterior to pelvic-fin origins; second dorsal fin small, less than 0.25 of the height of first dorsal fin, with a greatly elongated free rear tip extending backward nearly to upper precaudal pit, inner margin about twice as long as anterior margin, and a shallowly concave posterior margin; anal fin strongly falcate, its base moderately short and 1.3 to 1.6 times second dorsal-fin base and its posterior margin deeply notched; pectoral fins short, broad and slightly falcate, their posterior margins weakly concave; pelvic fins with a nearly straight posterior margin. **Colour:** uniform grey, greyish brown or olivaceous above, shading to white below; pectoral fins tipped grey or black below.



**Size:** Maximum total length at about 4.2 m; commonly to 3.6 m; size at birth between 42 and 55 cm; males maturing at 140 to 165 cm and females at about 212 cm.

**Habitat, biology, and fisheries:** The most common hammerhead in the area, estuarine and inshore to well offshore and semi-oceanic at or near the surface, with young mostly in coastal waters including estuaries. Individuals solitary, in pairs, or in small to huge schools. A powerful swimmer performing extensive migrations. Number of young 15 to 31 per litter. Feeds on pelagic fishes, other sharks, rays, squids, lobsters, shrimps, and crabs. Probably the most abundant tropical hammerhead, readily available to inshore artisanal and small commercial fisheries as well as to offshore operations. Caught mostly with pelagic and fixed bottom longlines and drift gill nets, but also other gear; the young are easily caught on light longline gear. The meat is utilized fresh, fresh-frozen, dried-salted, and smoked for human consumption; the fins are used to prepare shark-fin soup base and are of high value, especially from large individuals; the hides are used for leather, the oil for vitamins, and carcasses for fish meal. This species forms the bulk of the commercial hammerhead catch off the USA in the area, and probably of most other countries in Area 31 and possibly worldwide. It is regarded as being highly vulnerable and overfished off the USA, with catches dropping to less than a fourth of initial catches during the past decade and a half. Adults are often unaggressive or timid when approached by divers, and are popular subjects for ecotouristic diving worldwide including the Bahamas in the area. Small and medium-sized individuals make spectacular aquarium displays, and are kept by public aquaria in the area and elsewhere.

**Distribution:** Essentially circumglobal in coastal warm temperate and tropical seas.

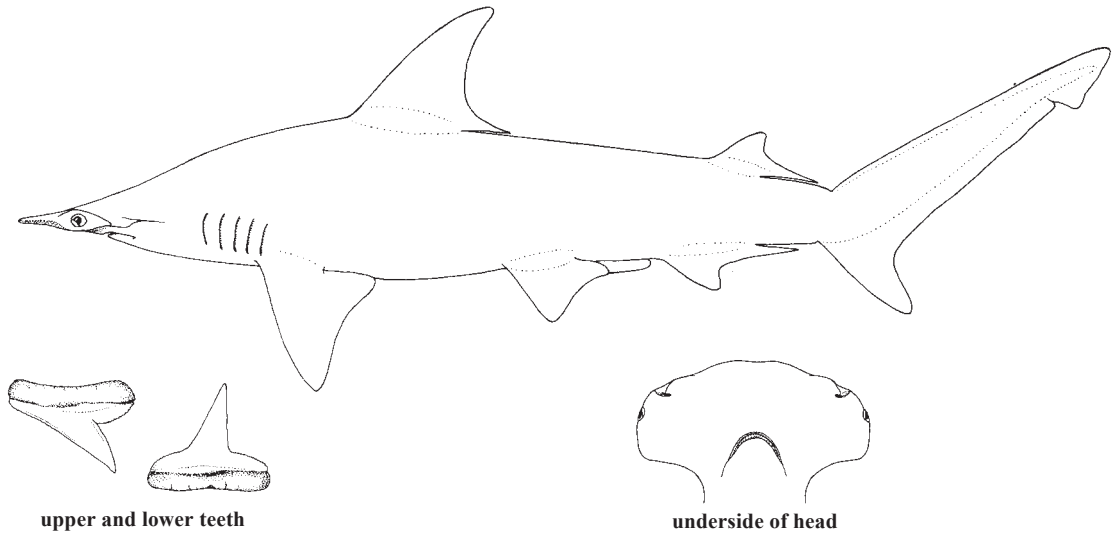


***Sphyrna media*** Springer, 1940

SPE

**Frequent synonyms / misidentifications:** *Sphyrna nana* Sadowsky, 1965 / None.

**FAO names:** En - Scoophead; Fr - Requin-marteau écope; Sp - Cornuda cuchara.

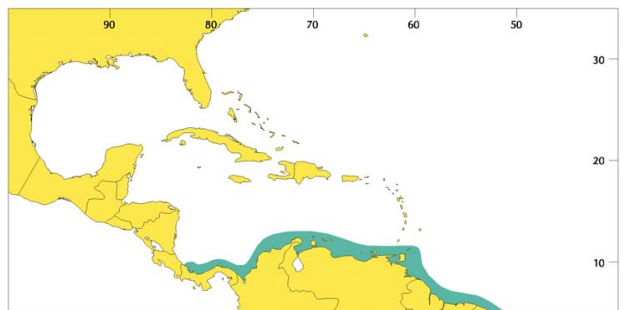


**Diagnostic characters:** Body elongate and laterally compressed. Head mallet-shaped, its anterior contour broadly arched, with a shallow and indistinct indentation at the midline and a weak depression opposite each nostril; lateral expansions of head very prominent, moderately broad transversely and broad from front to back; eyes small, their horizontal diameter less than length of shortest (fifth) gill slit, posterior margins of eyes slightly anterior to front of mouth; nostrils with prenarial grooves weak or absent; mouth broadly arched, with small labial furrows on lower jaw only; corners of mouth behind outer corners of head; teeth triangular, deeply notched posteriorly, with very narrow smooth-edged cusps, mostly cuspidate, not keeled and molariform. Fifth gill slit about as large as the 4 preceding ones, and located posterior to pectoral-fin origins. First dorsal fin high, moderately falcate, with its origin just behind level of pectoral-fin insertions, its free rear tip slender and ending over the pelvic-fin origins, and its inner margin slightly longer than the fin base; free rear tip of first dorsal fin over pelvic-fin origins; second dorsal fin fairly large, almost a third the height of first dorsal fin, with a greatly elongated free rear tip extending backward nearly to upper precaudal pit, inner margin of second dorsal fin about twice as long as second dorsal-fin anterior margin, and a shallowly concave posterior margin; anal fin semifalcate, its base moderately long and nearly twice length of second dorsal-fin base and its posterior margin shallowly concave; pectoral fins short, broad, and triangular, their posterior margins nearly straight; pelvic fins with nearly straight posterior margins. **Colour:** grey-brown above, light below, fins unmarked.

**Size:** Maximum total length to about 150 cm; size at birth 34 cm or less: adults 90 to 100 cm long or more.

**Habitat, biology, and fisheries:** A little-known inshore tropical hammerhead of the American continental shelves. Biology little known. Interest to fisheries limited. Taken with bottom longlines and utilized fresh for human consumption and for fish meal. Conservation status uncertain.

**Distribution:** Western Atlantic: Panama to southern Brazil. Eastern Pacific: Gulf of California to Ecuador and probably northern Peru.



***Sphyrna mokarran* (Rüppell, 1837)**

SPK

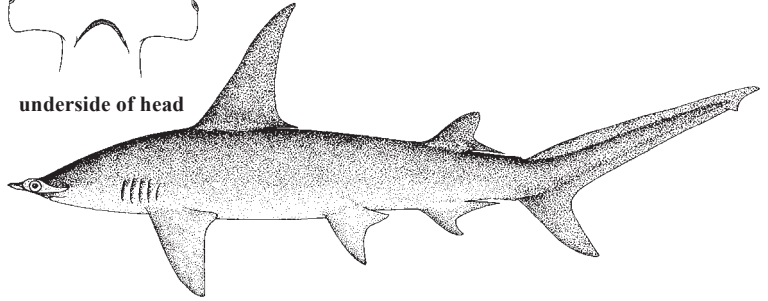
**Frequent synonyms / misidentifications:** None / *Sphyrna lewini* (Griffith and Smith, 1834), *Sphyrna zygaena* (Linnaeus, 1758), *Sphyrna tudes* (Valenciennes, 1822).

**FAO names:** En - Great hammer-head; Fr - Grand requin-marteau; Sp - Cornuda gigante.

**Diagnostic characters:** Body elongate and laterally compressed. **Head hammer-shaped, its anterior contour moderately arched in young but nearly straight in adults, with a shallow but distinct indentation at the midline and a shallow rounded depression opposite each nostril; lateral expansions of head very prominent, broad transversely and narrow from front to back; nostrils with weak**



underside of head

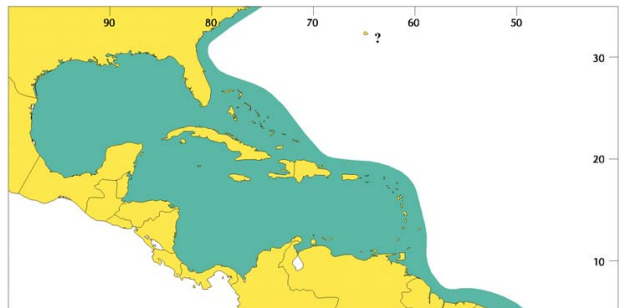


**prealar grooves; eyes small, their horizontal diameter much less than length of shortest (fifth) gill slit, posterior margins of eyes well anterior to mouth; mouth broadly arched, with small labial furrows on lower jaw only; corners of mouth about opposite or behind outer corners of head; teeth triangular, deeply notched posteriorly, with strongly serrated edges, mostly cuspidate and with posterior teeth not keeled and molariform. Fifth gill slit shorter than the 4 preceding ones, and located posterior to pectoral-fin origins. First dorsal fin very high, strongly falcate, with its origin above or just behind level of pectoral-fin insertions, its free rear tip not very slender and ending well anterior to pelvic-fin origins, and its inner margin less than a third of the fin-base length; second dorsal fin very large and tall (for a sphyrnid), with a moderately short inner margin about equal to the second dorsal-fin anterior margin, a free rear tip ending well anterior to the upper precaudal pit, and a deeply concave posterior margin; anal fin strongly falcate, its base about as long as second dorsal-fin base and its posterior margin deeply notched; pectoral fins short, broad, and strongly falcate, their posterior margins strongly concave; pelvic fins with deeply concave posterior margins. **Colour:** grey or grey-brown above, paler below; fins with dusky tips in young.**

**Size:** Maximum total length to at least 5.5 or 6.0 m, and possibly greater; commonly between 2.4 and 3.7 m; size at birth between 60 and 70 cm; males maturing at about 234 to 269 cm, females at about 250 to 300 cm.

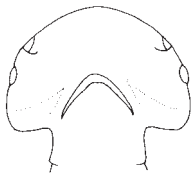
**Habitat, biology, and fisheries:** Powerful coastal and semi-oceanic species coming close inshore, often around and on coral reefs; also occurring near surface over deep water not far from land. Number of young 18 to 38 per litter. Feeds on a wide variety of bony fishes as well as other sharks, rays, squids, crabs, and lobsters. Although less abundant than *Sphyrna lewini*, it is regularly caught in the tropics, with longlines and other gear. Utilized for its meat, fresh, fresh-frozen, dried-salted, and smoked; for hides, processed into leather; for fins used for shark-fin soup base, which are highly valuable and are bought for higher prices than those of other hammerheads; for liver oil, processed for vitamins, and carcasses for fish meal. Regarded as potentially hazardous to people in the water, but few biting incidents reported and it is often docile and unaggressive when confronted by divers. Sought by ecotouristic divers worldwide, including those in the area. Its conservation status is of concern because of its large size, relative scarcity compared to other large hammerheads, extremely high fin value (which promotes 'finning' or removal of fins from the sharks and discarding carcasses at sea), lack of species-specific catch statistics, vulnerability to gill nets, lower fecundity compared to other large hammerheads, and presence as a complementary bycatch (for fins) in major offshore longline fisheries in the area that target tuna and swordfish.

**Distribution:** Essentially circumglobal in coastal and offshore warm temperate and tropical seas. Wide-ranging in the western Atlantic from North Carolina to Brazil, including the Gulf of Mexico and Caribbean.

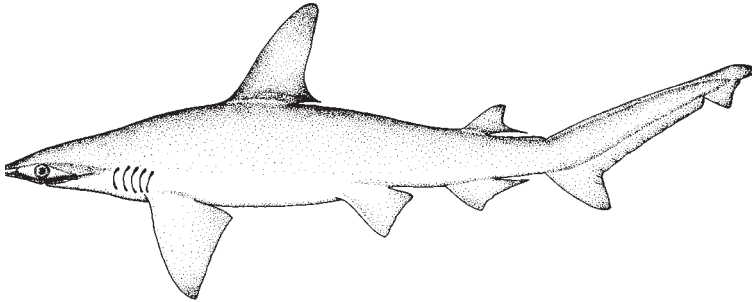


***Sphyrna tiburo*** (Linnaeus, 1758)

SPJ

**Frequent synonyms / misidentifications:** None / None.**FAO names:** **En** - Bonnethead; **Fr** - Requin-marteau tiburo; **Sp** - Cornuda decorona.

underside of head

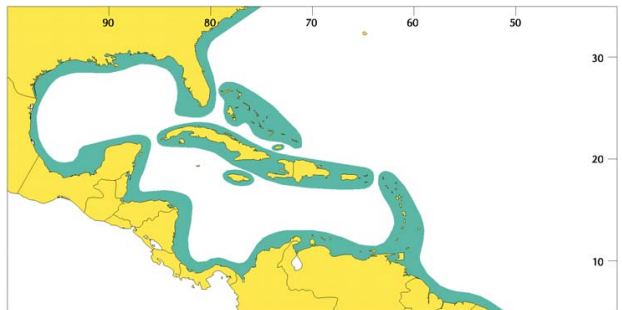


**Diagnostic characters:** Body elongate and laterally compressed. **Head flattened dorsoventrally and shovel- or bonnet-shaped, its anterior contour evenly rounded, not indented at midline or opposite the nostrils; lateral expansions of head relatively short (greatest width of head about 21% of total length but over 22% in other hammerheads); nostrils without prenarial grooves; eyes small, their horizontal diameter much less than length of shortest (fifth) gill slit, rear edges of eyes about opposite mouth; mouth strongly arched, corners of mouth in front of outer corners of head; teeth rather small and smooth-edged, rear teeth modified as broad, cusplless, carinate, molariform crushers.** First and fifth pairs of gill slits about as long as second to fourth, the fifth gill slits located above the pectoral-fin origins. First dorsal fin high and moderately falcate, **with its origin well behind the level of pectoral-fin insertions, its free rear tip slender and ending well anterior to pelvic-fin origins, and its inner margin less than one third the length of the fin base; second dorsal fin much smaller than first dorsal fin, its free rear tip very slender but ending somewhat anterior to upper precaudal pit, and a shallowly concave posterior margin; anal fin hardly falcate, its base nearly twice as long as second dorsal-fin base and with its posterior margin only slightly concave;** pectoral fins broad, short, and **triangular, their posterior margins nearly straight; pelvic fins with nearly straight posterior margins.** **Colour:** grey or greyish brown above; paler to almost white below.

**Size:** Maximum total length to about 150 cm; common to 80 cm; size at birth 35 to 40 cm; males maturing between 52 and 75 cm, females at 84 cm or less.

**Habitat, biology, and fisheries:** Inhabits shallow coastal waters over sandy and muddy bottoms, from intertidal down to 80 m; common in river estuaries and also on coral reefs. A sluggish species, often preyed upon by larger sharks. Number of young 4 to 16 per litter. Feeds chiefly on crustaceans, especially crabs and shrimps; to a lesser extent on clams, octopi, and small fishes. No targeted fishery but often taken on shrimp grounds throughout its range or as part of inshore directed small-shark fisheries. Separate statistics not reported. Caught mainly with shrimp trawls; also with trammel nets, and occasionally on hook-and-line. Marketed fresh or salted. Conservation status may be of less concern than with big hammerheads off the USA because it is not specifically targeted, has a lower value than the larger species, and occurs close inshore beyond the range of intensive offshore fisheries. Bycatch from shrimp trawlers has not declined off the USA in the Gulf of Mexico over the past 2 decades. Although small, sought in the area by ecotouristic divers. The best known hammerhead for public aquarium displays, being hardy and easily kept, and is displayed by many aquaria in the area and elsewhere.

**Distribution:** Western Atlantic and eastern Pacific. Occurs throughout the area, including Bermuda (rare); extending northward to New England (Nantucket Sound) and southward to northern Argentina. Very abundant in the northern Gulf of Mexico, over the continental shelf of western Florida, on the Campeche Bank, along the southeast coast of Cuba and off the Guyanas. A similar bonnethead shark occurs along the eastern Pacific coast from southern California, USA, to Ecuador. It has been recognized as a separate species (*Sphyrna vespertina*), or as an allopatric subspecies of *S. tiburo*.

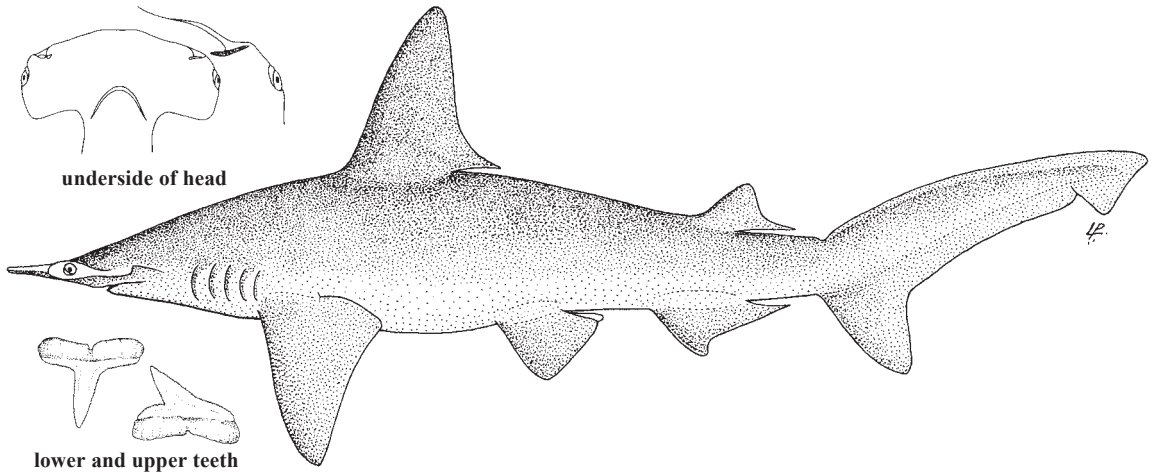


***Sphyrna tudes*** (Valenciennes, 1822)

SPQ

**Frequent synonyms / misidentifications:** *Sphyrna bigelowi* Springer, 1944 / *Sphyrna mokarran* (Rüppell, 1837).

**FAO names:** En - Smalleye hammerhead; Fr - Requin-marteau à petits yeux; Sp - Cornuda ojichica.

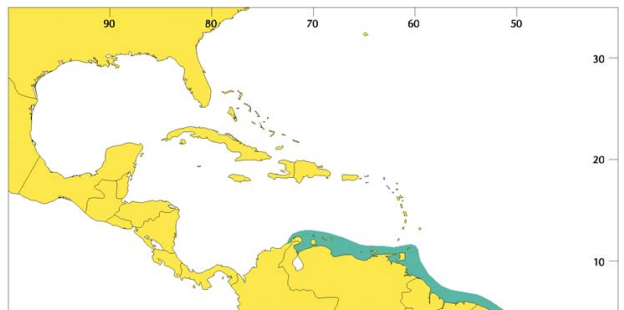


**Diagnostic characters:** Body elongate and laterally compressed. **Head mallet-shaped, its anterior contour broadly arched, with a shallow but distinct indentation at the midline** and a shallow rounded depression opposite each nostril; lateral expansions of head very prominent, broad transversely and broad from front to back; eyes small, their horizontal diameter much less than length of gill slits, **rear margins of eyes well in front of mouth; nostrils with strong prenarial grooves;** mouth narrowly arched, with small labial furrows on lower jaw only; corners of mouth behind outer corners of head; teeth triangular, deeply notched posteriorly, **with slender smooth-edged cusps, mostly cuspidate, posterior teeth not keeled and molariform.** Fifth gill slit about as long as the 4 preceding ones, and located posterior to pectoral-fin origin. First dorsal fin high, slightly falcate, **with its origin just behind level of pectoral-fin insertions, a slender free rear tip that extends over the pelvic-fin origins, and a short inner margin about one third the length of the fin base;** second dorsal fin moderately high, about 0.25 as high as first, with a moderately elongated free rear tip ending well in front of upper precaudal pit, an inner margin about as long as the anterior margin, and a **shallowly concave posterior margin;** anal fin weakly falcate, its base moderately long and about twice length of second dorsal-fin base; pectoral fins short, broad and weakly falcate, with slightly concave posterior margins; pelvic fins with straight posterior margins. **Colour:** grey-brown above, sometimes golden, light below, fins without markings.

**Size:** Maximum total length said to reach 150 cm, but mostly to 122 cm or less; size at birth about 30 cm; adults about 110 to 150 cm.

**Habitat, biology, and fisheries:** Inshore on continental shelves, found from 9 to 40 m. Viviparous, number of young 5 to 12 per litter. Feeds on small bony fishes, young sharks, crabs, squids, and shrimps. Interest to fisheries important but localized in the area. Rare to abundant, taken in coastal fisheries, but with details of gear and utilization usually not reported. Reported very common off the Guianas and off Trinidad in the western Atlantic but uncommon elsewhere. A large gill-net fishery operated off Trinidad in the 1980s for local consumption of this shark and others, but it was depleted locally after a decade. Conservation status of concern because of low fecundity, restricted range, and inshore habitat, which is subject to heavy artisanal fisheries.

**Distribution:** Western Atlantic: Venezuela to Uruguay. Records of this species from off Mississippi in the northern Gulf of Mexico were probably incorrect. An early Mediterranean record of this shark may also be incorrect.

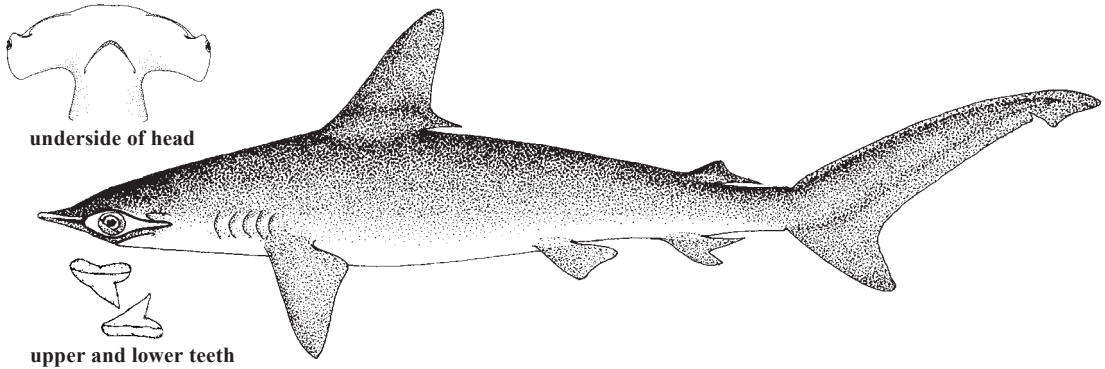


***Sphyrna zygaena*** (Linnaeus, 1758)

SPZ

**Frequent synonyms / misidentifications:** None / *Sphyrna lewini* (Griffith and Smith, 1834), *Sphyrna mokarran* (Rüppell, 1837).

**FAO names:** En - Smooth hammerhead; Fr - Requin-marteau commun; Sp - Cornuda cruz.



**Diagnostic characters:** Body elongated and laterally compressed. Head hammer-shaped, its anterior contour strongly arched in young but moderately rounded in adults, without a median indentation but with a deep rounded depression opposite each nostril; lateral expansions of head very prominent, broad transversely and narrow from front to back; eyes large (their horizontal diameter almost equal to length of shortest (fifth) gill slits, their posterior margins about opposite mouth or just anterior to it; nostrils with strong prenarial grooves; eyes large, their horizontal diameter greater than length of shortest (fifth) gill slits; mouth broadly arched, with small labial furrows on lower jaw only, corners of mouth anterior or about opposite to outer corners of head; teeth triangular, deeply notched posteriorly, with smooth or weakly serrated edges, mostly cuspidate, and with posterior teeth not keeled and molariform. Fifth gill slits shorter than the 4 preceding ones, and located posterior to pectoral-fin origins. First dorsal fin high, moderately falcate, with its origin above or just behind level of pectoral-fin insertions with its free rear tip not very slender and ending well anterior to the pelvic-fin origins and its inner margin less than 1/3 the length of its base; second dorsal fin small, with a very long inner margin almost twice the length of its anterior margin, a free rear tip ending well anterior to upper precaudal pit, and a nearly straight to shallowly concave posterior margin; anal fin falcate, with base slightly longer than second dorsal-fin base and a deeply notched posterior margin; pectoral fins short, broad, and slightly falcate, with weakly concave or nearly straight posterior margins; pelvic fins with straight to shallowly concave posterior margins. **Colour:** brownish olive or plain grey above, white or grey-white below; fins nearly plain, dusky, or blackish-tipped.

**Size:** Maximum total length probably between 3.7 and 4 m, commonly between 2.75 and 3.35 m; size at birth between 50 and 60 cm; adults maturing at about 210 to 240 cm.

**Habitat, biology, and fisheries:** Common to abundant coastal and semi-oceanic, living close inshore (especially the young) and near surface in deep water not far offshore. A strong-swimming shark, migrating northward in summer; young often found in large schools of hundreds of individuals. Number of young 29 to 37 per litter. Feeds on bony fishes, other sharks, rays, crustaceans, and squids. Caught with pelagic longlines, handlines, and even pelagic and bottom trawls. Utilized fresh, dried-salted, and possibly smoked; hides are processed for leather; liver oil is extracted for vitamins; fins are processed into shark-fin soup base; and carcasses utilized for fish meal. Conservation status uncertain because of this species being confused with other species, particularly *Sphyrna lewini*, but of concern as with that species because of heavy fisheries where it occurs. It is uncertain if this shark figures in shark viewing within the area.

**Distribution:** Essentially circumglobal in temperate and tropical seas; in the area, Nova Scotia to Florida and the Virgin Islands; also northeastern Brazil to Argentina. Not recorded in the Gulf of Mexico. Possibly more wide-ranging in the area.

