

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Indian Ocean)

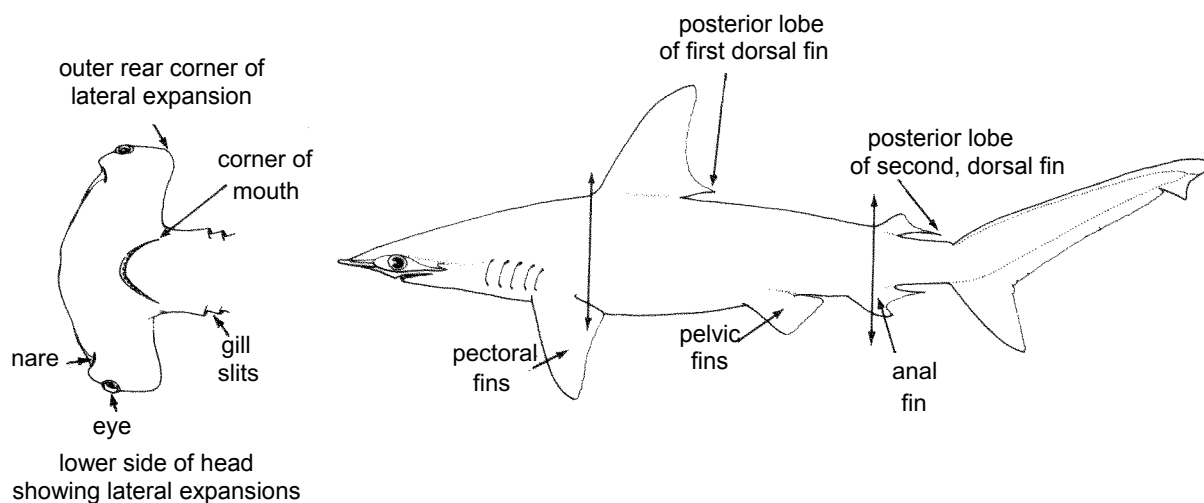
SPHYRNIDAE

Hammerhead and bonnethead sharks

Medium- to large-sized sharks. Body elongate and moderately slender, anterior portion of head much flattened dorso-ventrally and widely expanded laterally in "hammer" form, with the eyes at its outer edges. Well developed nictitating lower eyelids; teeth blade-like, with a single cusp. Two dorsal fins, the first high and pointed, its base much shorter than caudal fin and wholly anterior to origin of pelvics; caudal fin strongly asymmetrical, with a well marked subterminal notch and a small, but well defined lower lobe. Caudal peduncle not strongly flattened dorso-ventrally or widely expanded laterally, without longitudinal ridges but with precaudal pits.

Colour: back predominantly grey or brassy; belly white.

Hammerhead sharks inhabit surface waters in tropical and warm-temperate areas. Small species are confined to coastal waters; juveniles of large species are coastal, while adults are primarily semi-oceanic, although they often approach the coast in search of food. They are voracious predators, feeding mainly on fishes, sharks, rays and bottom-dwelling animals (some crustaceans and molluscs). A few species are reported dangerous to bathers. 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.



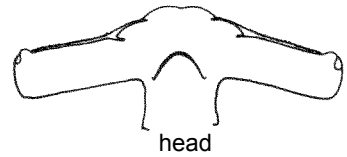
SIMILAR FAMILIES OCCURRING IN THE AREA:

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

KEY TO GENERA AND SPECIES OCCURRING IN THE AREA:

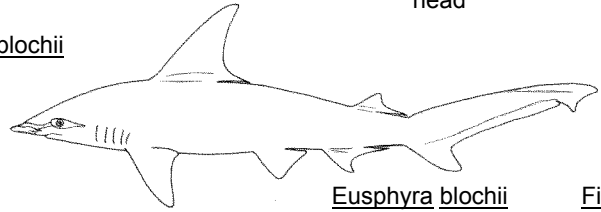
1a. Expanded lateral blades of head very narrow and winglike, with a series of small bumps along edges in front of nostrils: width across head 40 or 50% of total length; nostrils enormously expanded, each nearly twice the mouth width (Fig.1)

Eusphyra blochii



1b. Expanded lateral blades of head relatively broad, not winglike, and without small bumps along edges in front of nostrils: width across head less than 31% of total length; nostrils narrow, less than half the mouth width (Figs 2-4)

Sphyrna

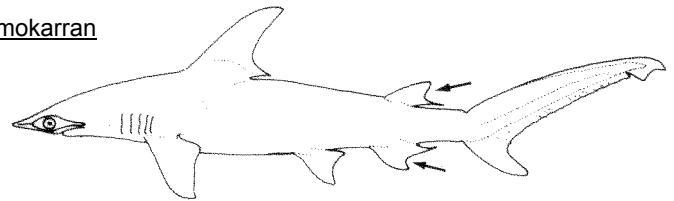
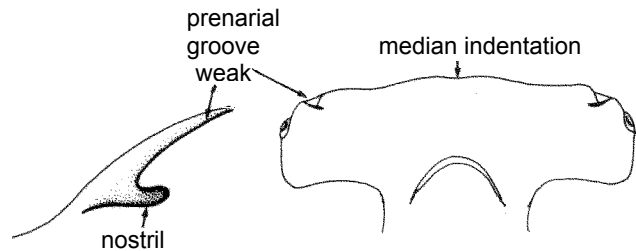


Eusphyra blochii

Fig.1

2a. 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, with a short inner margin; posterior margins of second dorsal and pelvic fins deeply concave (Fig.2)

Sphyrna mokarran



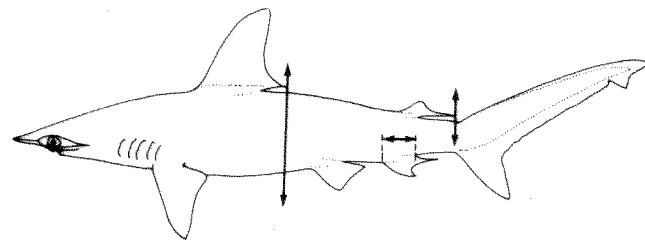
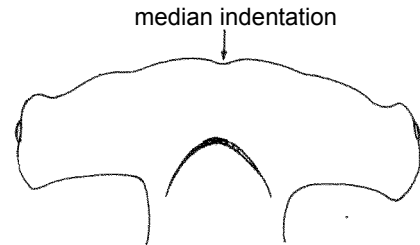
Sphyrna mokarran

Fig.2

2b. Anterior margin of head moderately convex in adults, strongly so in young, prenarial grooves well developed: teeth generally smooth, but possibly serrated in adults: first dorsal fin erect or slightly falcate; second dorsal less than a third the height of first, with a long inner margin; posterior margins of second dorsal and pelvic fins slightly concave to nearly straight (Figs 3,4)

3a. 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 (Fig-3)

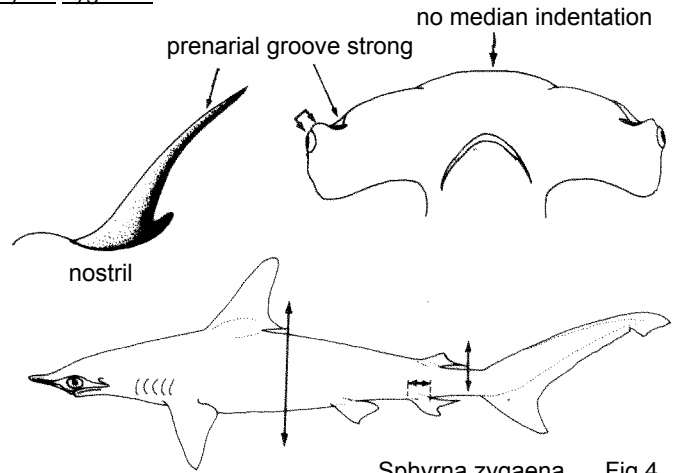
Sphyrna lewini



Sphyrna lewini

Fig.3

3b. Median indentation absent from anterior margin of head; free rear tip of second dorsal fin well head of upper caudal fin origin; anal fin base about as large as that of second dorsal (Fig.4) Sphyrna zygaena



Sphyrna zygaena Fig.4

LIST OF SPECIES OCCURRING IN THE AREA:

Code numbers are given for those species for which identification Sheets are included

Eusphyrna blochii (Cuvier, 1817)

SPHYRN Fus

Sphyrna lewini (Cuvier, Griffith & Smith, 1834)

SPHYRN Sphyrn 1

Sphyrna mokarran (Rüppell, 1837)

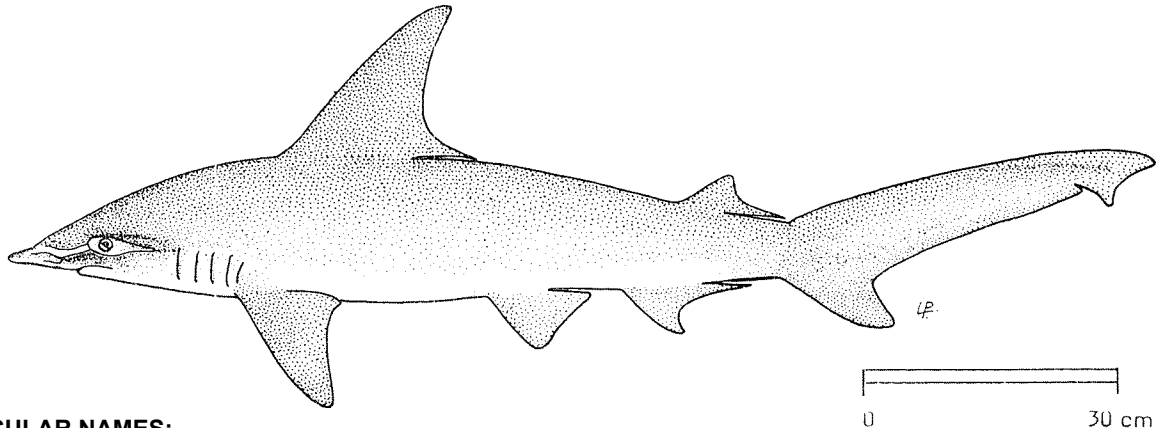
SPHYRN Sphyrn 3

Sphyrna zygaena (Linnaeus, 1758)

SPHYRN Sphyrn 4

FAO SPECIES IDENTIFICATION SHEETS

FAMILY: SPHYRNIDAE

FISHING AREA 51
(W. Indian Ocean)Eusphyra blochii (Cuvier, 1817)OTHER SCIENTIFIC NAMES STILL IN USE: Sphyrna blochii (Cuvier, 1817)

VERNACULAR NAMES:

FAO : En - Wrigghead shark
 Fr - Requin marteau planeur
 Sp - Cornuda planeadora

NATIONAL:

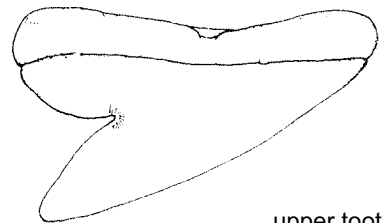
DISTINCTIVE CHARACTERS:

Body elongate and compressed. Head shaped like a broad arrowhead or a pair of aircraft wings in dorsal or ventral view, tremendously expanded laterally and relatively narrow from front to back, with width across head 2/5 to 1/2 of total length; anterior contour of head almost V-shaped in young but with lateral wings of head becoming transverse in adults; a shallow, but distinct indentation at the midline of head and a very broad, shallow indentation opposite each nostril, the edge of which has a row of low bump; nostrils greatly elongated, wider than mouth, with strong prenarial grooves anteromedial to their incurrent apertures; posterior margins of eyes opposite or behind front of mouth; teeth triangular, deeply notched distally, with relatively narrow oblique cusps and unserrated edges. First dorsal fin very high, strongly falcate; second dorsal fin small and low, less than a third of height of first, with a greatly elongated inner margin nearly or quite twice the fin height, a free rear tip that nearly or quite reaches upper caudal fin origin, and a shallowly concave posterior margin; pelvics with posterior margin nearly straight; anal fin base about 1/3 longer than second dorsal fin base.

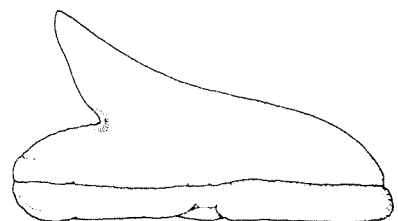
Colour: grey or grey-gown above, paler below.



underside of head



upper tooth



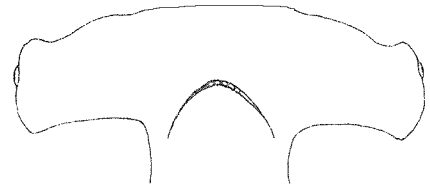
lower tooth

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other species of Sphyrnidae: head hammer-shaped, less expanded laterally, width across head less than 1/3 of total length, no bumps along prenarial margin of head, nostrils much smaller, less than mouth width.

SIZE :

Maximum: about 152 cm.



underside of head

Sphyrna lewini

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

An Indo-West Pacific coastal species restricted in the area to the northeast, from the "Gulf" eastward to Pakistan, India and Sri Lanka. Elsewhere in the Eastern Indian Ocean/Western Central Pacific extending eastward to Thailand, Borneo, China, the Philippine Islands and Australia.

Inshore waters in the area. Viviparous, litters from 0 to 11 young; size at birth 32 to 45 cm.

A small species, probably harmless to people. Commonly taken in fisheries in the area.

PRESENT FISHING GROUNDS:

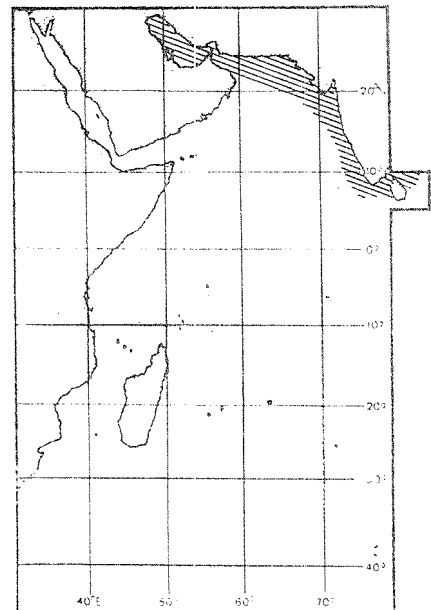
Both inshore and offshore.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

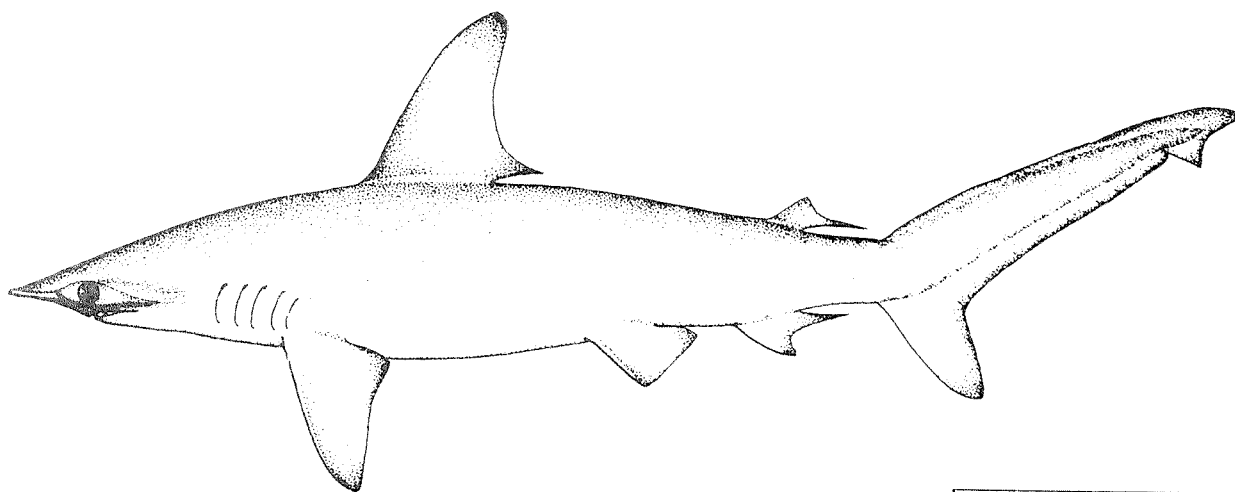
Caught with floating gillnets, probably fixed bottom gillnets, with floating longlines, and probably on hook and line.

Utilized fresh for human consumption; livers yield a high-potency vitamin oil; and offal is probably used for fishmeal.



FAO SPECIES IDENTIFICATION SHEETS

FAMILY: SPHYRNIDAE

FISHING AREA 51
(W. Indian Ocean)Sphyrna lewini (Cuvier, Griffith & Smith, 1834)OTHER SCIENTIFIC NAMES STILL IN USE : Sphyrna diplana Springer, 1941

0 60 cm

VERNACULAR NAMES:

FAO : En - Scalloped hammerhead
Fr - Requin marteau halicorne
Sp - Cornuda común

NATIONAL :

DISTINCTIVE CHARACTERS:

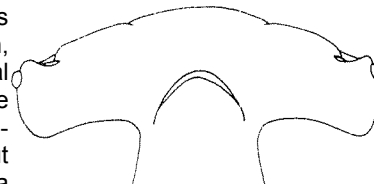
Body elongate and laterally compressed. Head "hammer"-shaped, its anterior contour broadly arched in young; but moderately so in adults, with a shallow but distinct indentation at the midline and a deep rounded depression opposite each nostril; lateral expansions of head very prominent, broad transversely and narrow from front, to back; nostrils with strong prenarial grooves anteromedial to their incurrent apertures; posterior margins of eyes slightly posterior to or nearly opposite front of mouth; mouth broadly arched; teeth triangular, deeply notched posteriorly, with smooth or finely serrated edges. First dorsal fin high, moderately falcate: second dorsal small, less than one fourth the height of first, with a greatly elongated free rear tip extending backward nearly to upper caudal fin origin, an inner margin about twice as long as the anterior fin margin and a shallowly concave posterior margin; pectoral fins short and broad; pelvics with a nearly straight posterior margin; second dorsal fin base about three to four fifths the length of anal base.

Colour: uniform grey, greyish brown or olivaceous above, shading to white below; pectoral fins tipped grey or black ventrally.

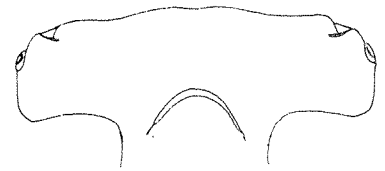
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Sphyrna zygaena: anterior contour of head not indented at midline; free rear tip of second dorsal fin shorter, not extending backward as near to precaudal pit as in S. lewini.

S. mokarran: anterior contour of head nearly straight in adults, prenarial grooves poorly developed, eyes well in front of mouth, teeth with strongly serrated edges; first dorsal fin more falcate; second dorsal about one third the height of first, with a strongly concave posterior edge, an inner margin about equal in length to anterior fin margin, and a free rear tip ending well anterior to upper caudal fin origin; pelvic fins with strongly concave posterior margins.

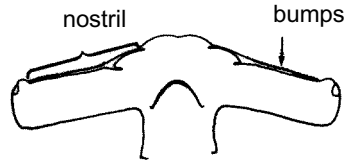


S. zygaena

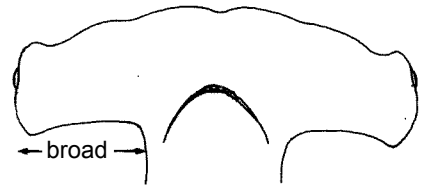


S. mokarran

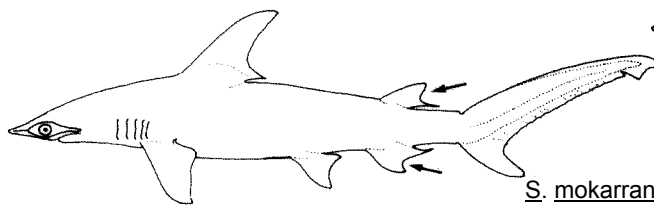
E. blochii: head extremely expanded, its width 2/5 to 1/2 of total length (less than 1/3 of total length in S. lewini), shaped like a broad arrowhead or a pair of aircraft wings in dorsoventral view, nostrils greatly expanded, their width much greater than mouth width (much less than mouth width in S. lewini), a row of bumps along front edge of head lateral to prenarial grooves.



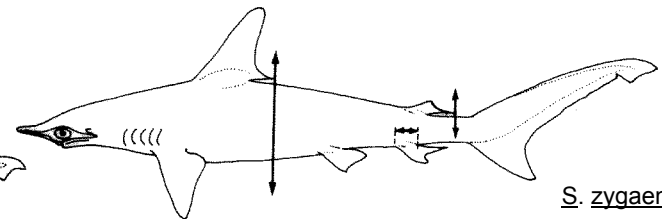
E. blochii



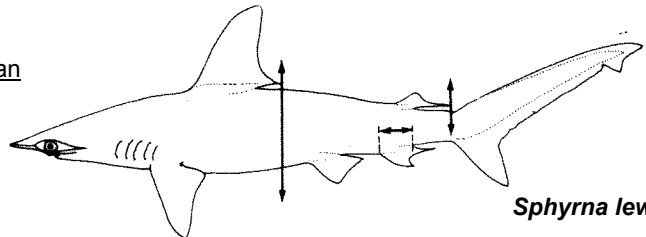
Sphyrna lewini



S. mokarran



S. zygaena



Sphyrna lewini

SIZE:

Maximum: 420 cm; common to 360

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

A pantropical species occurring in the area from South Africa and Madagascar northward to the Red Sea, Pakistan, India and Sri Lanka. Probably the commonest hammerhead in the area, and one of the more abundant species of sharks.

Estuarine and inshore to well offshore and semi-oceanic, with young mostly in coastal waters. Adults more often solitary or in pairs, while the young form huge schools. Viviparous, number of young up to 30; size at birth about 50 cm.

Feeds on pelagic fishes (including sardines, jacks, bluefish, tenpounders and mullets), other sharks and rays, squids, lobsters, shrimp and crabs. Adults considered potentially dangerous but often unaggressive when approached by divers.

PRESENT FISHING GROUNDS :

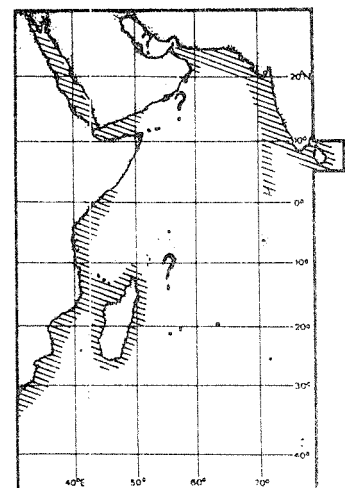
Both inshore and offshore in the area.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION :

Separate statistics are not reported for this species.

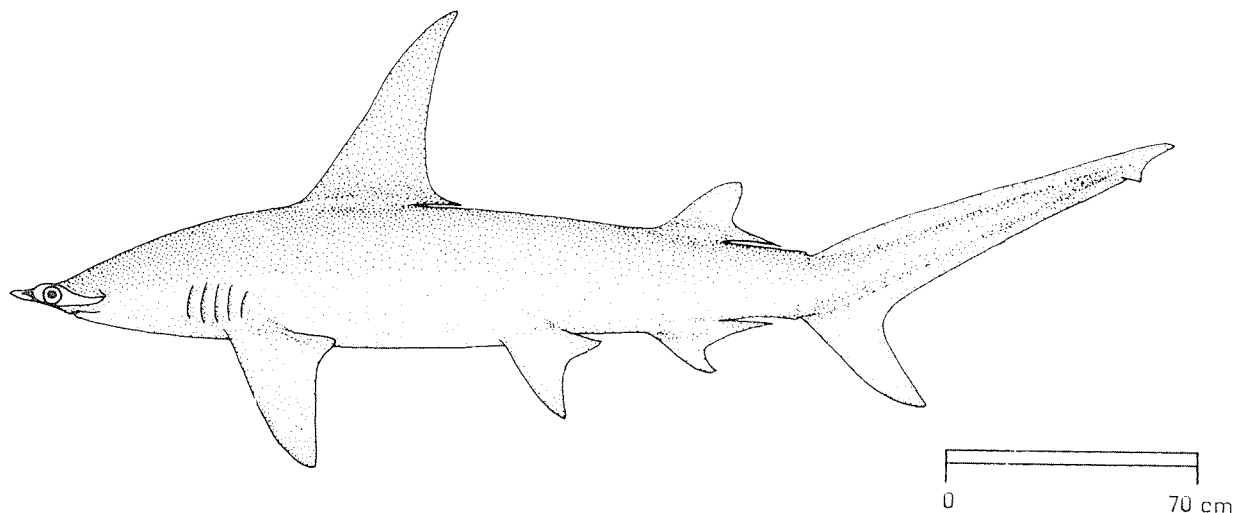
Caught with floating and bottom gillnets, floating longlines and probably on hook and line.

Utilized fresh and dried-salted for human consumption; fins used in the oriental sharkfin trade; livers processed for vitamins and offal for fishmeal.



FAO SPECIES IDENTIFICATION SHEETS

FAMILY: SPHYRNIDAE

FISHING AREA 51
(W. Indian Ocean)*Sphyrna mokarran* (Rüppell, 1837)OTHER SCIENTIFIC NAMES STILL IN USE : *Sphyrna tudes* (Valenciennes, 1822)

VERNACULAR NAMES:

FAO : En - Great hammerhead
 Fr - Grand requin marteau
 Sp - Cornuda gigante

NATIONAL:

DISTINCTIVE 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 prenarial grooves anteromedial to their incurrent apertures; posterior margins of eyes well anterior to mouth; mouth broadly arched; teeth triangular, deeply notched posteriorly, with strongly serrated edges. First dorsal fin very high, strongly falcate; second dorsal very large, with a rather short inner margin (about equal to anterior fin margin), a free rear tip ending well anterior to upper caudal fin origin, and a deeply concave posterior margin; pectoral fins short and broad; pelvics with a deeply concave posterior mares; anal fin base about as long as second dorsal base.

Colour: grey or grey-brown above, paler below; fins with dusky tips in young.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Sphyrna zygaena: no median indentation in frontal contour of head.

Other species of Sphyrnidae: anterior contour of head more convex, prenarial grooves deeper, teeth smooth-edged or finely serrated, first dorsal fin lower and less falcate, second dorsal smaller and with a less deeply concave posterior margin, pelvic fins with a nearly straight posterior margin, anal fin base usually longer than second dorsal base.

SIZE:

Maximum: to 550 or 600 cm, and possibly more, but most adults between 240 and 365 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

A circumtropical species, wideranging in the area but current distributional records are spotty; from off South Africa, Madagascar, Mauritius and Seychelles Islands, the Red Sea, the "Gulf", probably off Pakistan, and the coasts of India and Sri Lanka. Elsewhere wide-ranging in the Eastern Indian Ocean/Western Central and Eastern Pacific, Atlantic and Mediterranean.

A powerful coastal and semi-oceanic species coming close inshore, often around and on coral reefs; also occurring near the surface in deep water not far from land. Viviparous, litters from 18 to 38 fetuses: size at birth between 60 and 70 cm.

Feeds on bony fishes (including sparids), other sharks, rays, squids, and lobsters. Potentially dangerous to people in the water.

PRESENT FISHING GROUNDS:

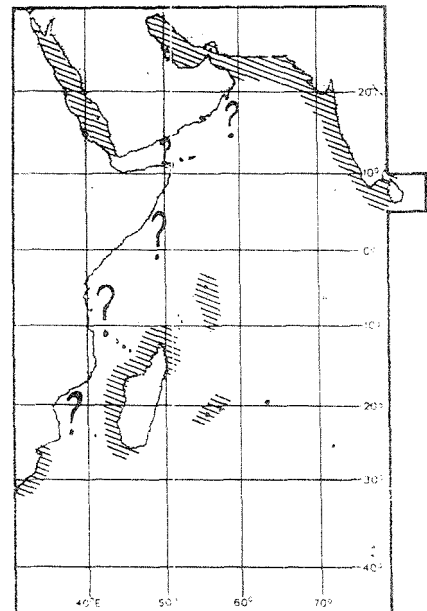
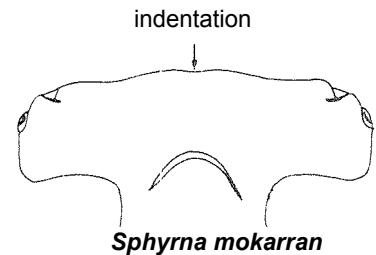
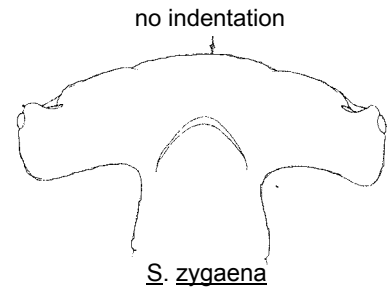
Both inshore and offshore.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught with floating gillnets, bottom gillnets, floating longlines and probably on hook and line.

Utilized fresh and dried-salted for human consumption; oil processed for vitamins; fins used in the oriental sharkfin trade; and offal for fishmeal.

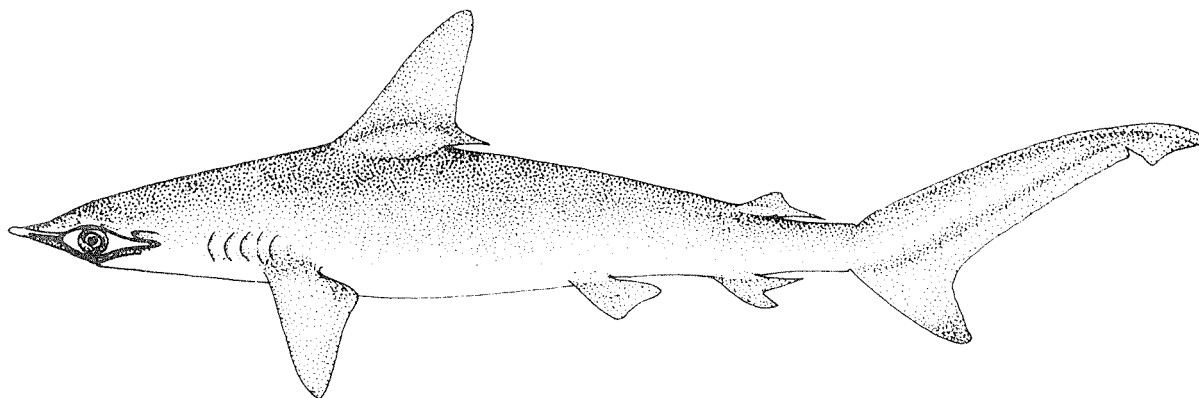


FAO SPECIES IDENTIFICATION SHEETS

FAMILY : SPHYRNIDAE

FISHING AREA 51
(W. Indian Ocean)*Sphyrna zygaena* (Linnaeus, 1758)

OTHER SCIENTIFIC NAMES STILL IN USE: None



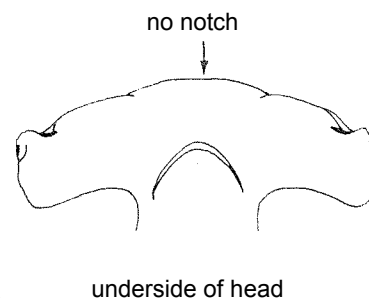
VERNACULAR NAMES:

FAO : En - Smooth hammerhead
 Fr - Requin marteau commun
 Sp - Cornuda cruz (= Pez martillo)

NATIONAL :

DISTINCTIVE 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; nostrils with strong prenarial grooves anteromedial to their incurrent apertures; eyes large, their horizontal diameter greater than length of shortest (fifth) gill slit, their posterior margins about opposite mouth or just anterior to it; mouth broadly arched; teeth triangular, deeply notched posteriorly, with smooth or finely serrated edges. First dorsal fin high, moderately falcate; second dorsal small, with a very long inner margin (almost twice the anterior fin margin), a free rear tip ending well anterior to upper caudal fin origin, and a nearly straight to shallowly concave posterior margin; pectoral fins short and broad; pelvic fins with posterior margins straight to shallowly concave; anal fin base slightly longer than second dorsal fin base.



underside of head

Colour: brownish-olive, or plain grey above, white or grey-white below; fins nearly plain, dusky or blackish-tipped.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other species of Sphyrnidae: a median indentation in the anterior contour of head.

SIZE:

Maximum: probably between 370 to 400 cm, adults often between 275 to 335 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

In the area, distribution in some parts uncertain because of confusion of this species with *S. lewini*; definitely known from South Africa and Mozambique, possibly the "Gulf" and from southeastern India and Sri Lanka, but probably more widespread. Elsewhere in the Atlantic, Mediterranean, Western Central, and Eastern Pacific.

A common coastal and semioceanic species, living close inshore (especially the young) and near the surface in deep water riot far offshore. A strong-swimming shark, migrating northward in summer; young often found in large aggregations of hundreds of individuals. Viviparous, litters from 29 to 37 fetuses; size at birth about 50 or 60 cm.

Feeds on bony fishes, other sharks, rays, crustaceans and squids. Potentially dangerous to people.

PRESENT FISHING GROUNDS:

Off southeastern India and Sri Lanka, possibly also Mozambique.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught with drifting gillnets, also floating longlines.

Utilized fresh and probably dried-salted for human consumption; oil for vitamin extraction; fins for the oriental sharkfin trade; and offal for fishmeal.

