

FAO SPECIES IDENTIFICATION SHEETS

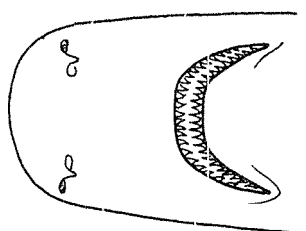
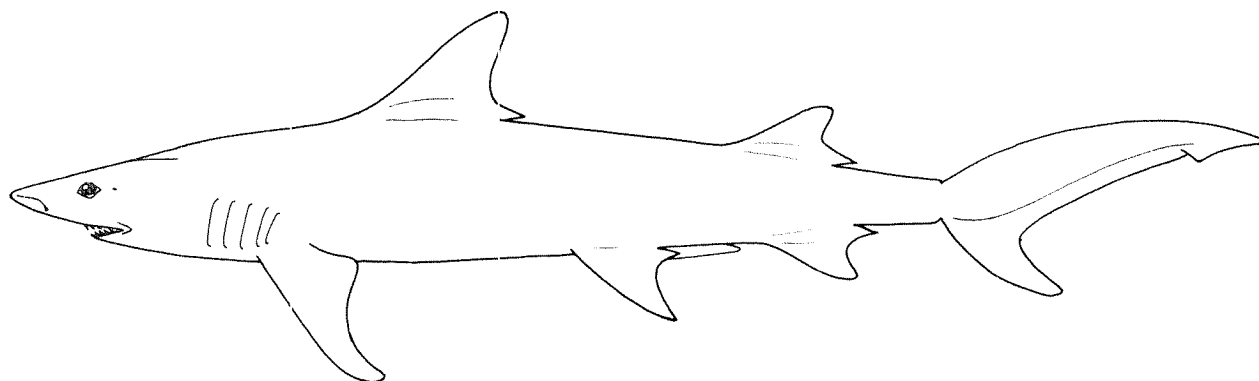
FISHING AREA 51
(W. Indian Ocean)

HEMIGALEIDAE

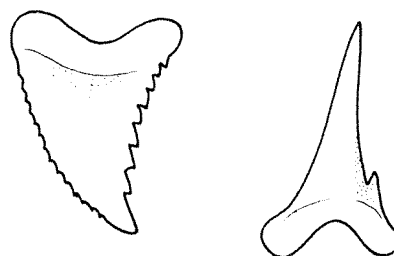
Weasel sharks

Small to medium-sized sharks. Trunk and precaudal tail cylindrical, not depressed and without lateral ridges; precaudal tail much shorter than trunk. Head not expanded laterally, moderately depressed; 5 small to medium-sized gill slits present, the last 2 or 3 over or behind pectoral fin origins, their upper ends expanded partway onto upper surface of head in some species; no gill sieves or gillrakers; spiracles minute, and behind but not below eyes; nostrils without barbels, rasoral grooves, or circumnarial grooves, well-separated from mouth; eyes on sides of head, with a well-developed nictitating lower eyelid; snout moderately long, depressed, and parabolic to broadly rounded, not greatly flattened and bladeliike and without lateral teeth and barbels; mouth moderately large, arched and elongated, and extending well behind eyes; labial furrows present on both jaws and moderately large, reaching front of mouth or ending well behind it; teeth small to large, bladeliike, and with a single cusp on teeth of both jaws, cusplets or strong serrations present on upper teeth, and cusplets variably present or absent on lower teeth; anterior teeth in upper jaw smaller than lateral teeth and not separated from them by smaller intermediate teeth on each side. Two dorsal fins without spines, the first dorsal fin moderately large, high and angular or subangular, much shorter than the caudal fin, with its base located over the interspace between the pectoral and pelvic fin bases and entirely anterior to origins of pelvic fins; second dorsal fin moderately large, about 2/3 the size of first dorsal; anal fin moderately large, slightly smaller than second dorsal, with its origin slightly behind second dorsal fin origin but in front of second dorsal midbase; caudal fin strongly asymmetrical, much less than half of total length, with a rippled or undulated dorsal margin, a well-marked subterminal notch, and a short, but well-defined lower lobe; vertebral axis of caudal fin raised above body axis. Caudal peduncle cylindrical, without keels but with well-developed precaudal pits. Intestinal valve of spiral type.

Colour: grey, grey-brown or dark grey; above, white or cream below, fins sometimes with dusky tips or white posterior margins; sometimes a few white spots but no elaborate colour pattern.



underside of head



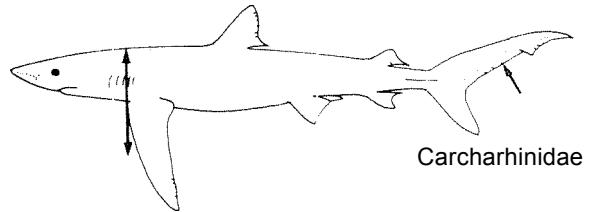
upper and lower teeth

The Hemigaleidae is a small family of small to medium-sized, coastal sharks with a primary diversity (about 5 species) in the continental and insular tropical waters of the Indo-West Pacific (but not extending into the Central Pacific); a single additional species occurs in the Atlantic. It is closely related to the large family Carcharhinidae. These sharks feed on small fishes, octopi, and probably other invertebrates, and are not known to have attacked people. All species in the area are fished for human consumption, but due to their modest abundance they form only a small fraction of the shark catch in the area.

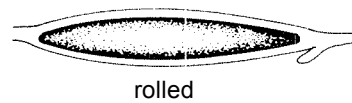
SIMILAR FAMILIES OCCURRING IN THE AREA:

Carcharhinidae: intestine with a scroll valve; also, no carcharhinids in the area show the character combination of long snout, spiracles, upper teeth with cusplets, lower teeth well-differentiated from uppers, long labial furrows, and second dorsal fin about 2/3 as large as first dorsal and with its origin anterior to that of the slightly smaller anal fin.

Proscylliidae and Triakidae: no precaudal pits or undulated dorsal caudal margin, teeth not strongly differentiated in upper and lower jaws, spiracles usually larger.



Carcharhinidae



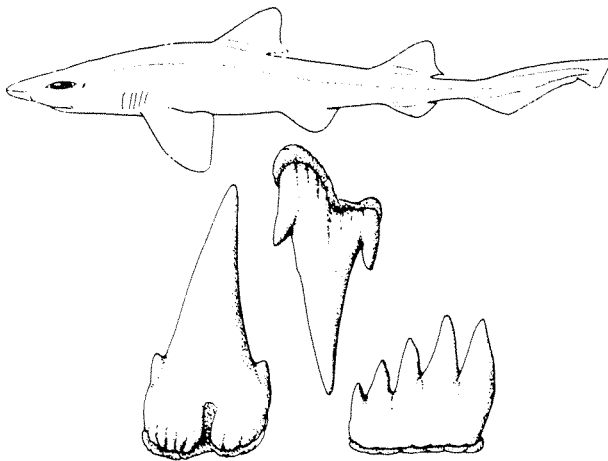
rolled



unrolled
scroll valve (diagrammatic)
Carcharhinidae



Hemigaleidae and many other families

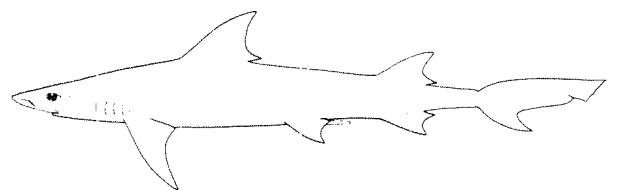


upper and lower teeth

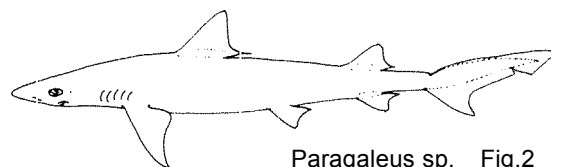
Proscylliidae

KEY TO GENERA AND SPECIES OCCURRING IN THE AREA:

- 1a. Lower teeth near symphysis with short, straight or weakly hooked cusps that are concealed or barely protrude when mouth is closed (Fig.5a,b); gill slits small, less than twice the eye length (Figs.1,2)
- 2a. Lower teeth near symphysis with erect cusps and arched roots, giving them an inverted Y shape; no cusplets on lower teeth; mouth very short, broadly arched (Fig.5a); pelvic fins, both dorsal fins, and ventral caudal fin lobe strongly falcate (Fig.1) Hemigaleus microstoma
- 2b. Lower teeth near symphysis with semi-erect cusps and straight roots, giving them an inverted T shape; cusplets present on lower teeth; mouth longer, narrowly arched (Fig.5b); pelvic, dorsal and caudal fins not falcate (Fig.2) ... Paragaleus sp.



Hemigaleus microstoma Fig.1

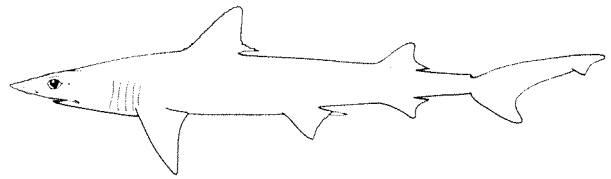


Paragaleus sp. Fig.2

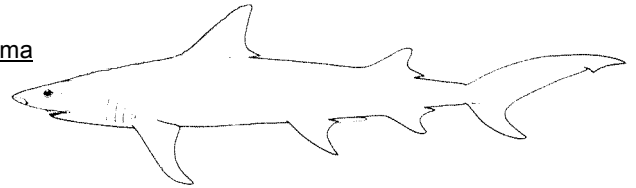
1b. Lower teeth near symphysis with long, strongly hooked cusps that prominently protrude from mouth when it is closed (Fig.5c,d); gill slits large, over twice the eye length

3a. Snout obtusely wedge-shaped in dorsoventral view; teeth present at symphysis of lower jaw; mesial edges of upper teeth smooth at all sizes (Fig.5c); fins not falcate, posterior margins of pelvic and pectoral fins straight or slightly concave (Fig.3) Chaenogaleus macrostoma

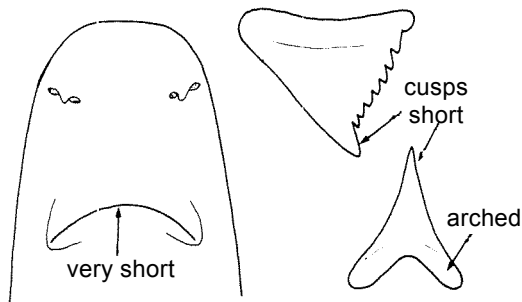
3b. Snout bluntly rounded in dorsoventral view; teeth absent at symphysis of lower jaw; mesial edges of upper teeth serrated (but smooth in young below 60 cm) (Fig. 5d); fins strongly falcate, posterior margins of pelvic and pectoral fins deeply concave (Fig.4) Hemipristis elongatus



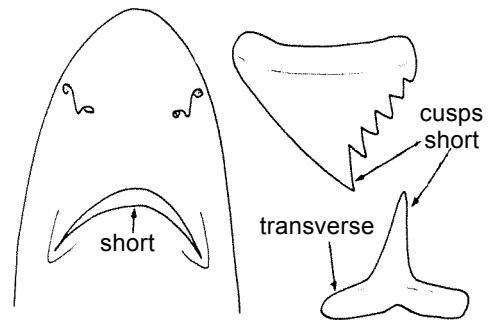
Chaenogaleus macrostoma Fig.3



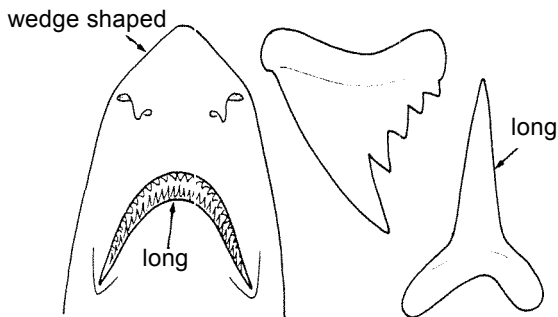
Hemipristis elongatus Fig.4



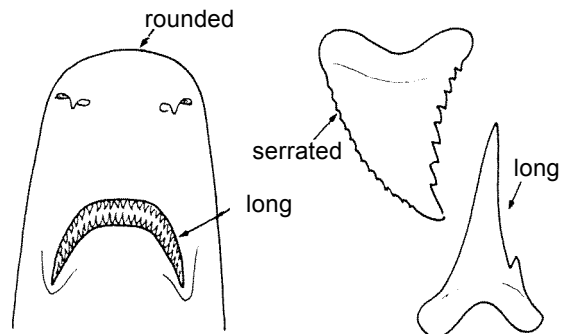
a) Hemigaleus microstoma



b) Paragaleus sp.



c) Chaenogaleus macrostoma



d) Hemipristis elongatus

underside of head and teeth

Fig.5

LIST OF SPECIES OCCURRING IN THE AREA:

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

* <u>Chaenogaleus macrostoma</u> (Bleeker, 1852)	HEMIG Chaen 1
** <u>Hemigaleus microstoma</u> Bleeker, 1852	HEMIG Hemig 1
*** <u>Hemipristis elongatus</u> (Klunzinger, 1871)	HEMIG Hemip 1
**** <u>Paragaleus</u> sp.	

Prepared by L.J.V. Compagno, Tiburon Center for Environmental Studies, San Francisco State University, Tiburon, California, USA

*Including Hemigaleus balfouri Day, 1878

**Not previously reported from the area, but specimens examined by the writer from India and Sri Lanka

***Including Heterogaleus ghardaquensis Gohar & Mazhar, 1964

****An undescribed species of Paragaleus, to be named by the author, occurs in the Arabian Sea south to southeastern India and probably Sri Lanka, and possibly off Madagascar (where it was ascribed to the Atlantic Paragaleus, P. pectoralis). It is taken in the Indian shark fishery and marketed fresh for human consumption

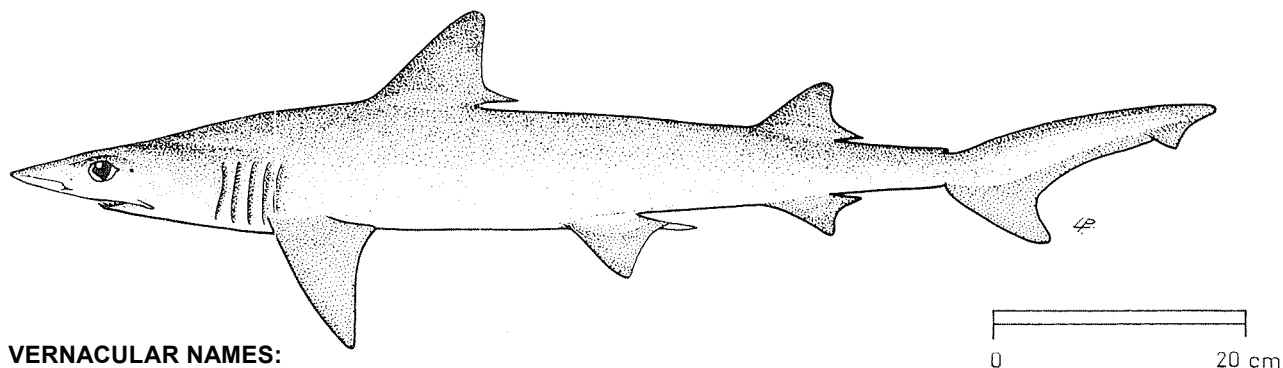
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: HEMIGALEIDAE:

FISHING AREA 51
(W. Indian Ocean)

Chaenogaleus macrostoma (Bleeker, 1852)

OTHER SCIENTIFIC NAMES STILL IN USE : Hemigaleus macrostoma Bleeker, 1852
Hemigaleus balfouri Day, 1878



VERNACULAR NAMES:

FAO : En - Hooktooth shark
Fr - Milandre harpon
Sp - Comadreja ganchuda

NATIONAL:

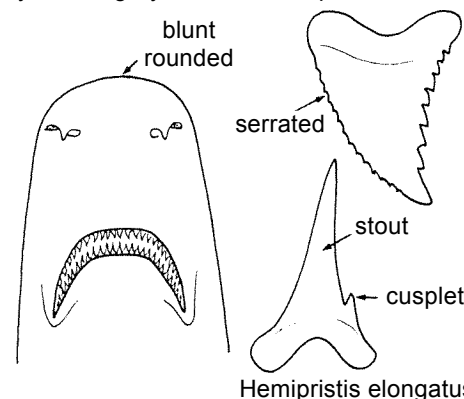
DISTINCTIVE CHARACTERS:

A small shark. Body moderately slender; snout long, its length slightly greater than mouth width, obtusely wedge-shaped toward tip; labial furrows moderately long and easily seen, the uppers ending well behind symphysis of lower jaw; anterior nasal flaps with a short, broad, triangular lobe; mouth long and parabolic, its length over 2/3 of the width; spiracles small; gill slits ver long, the longest over twice the eye length; teeth in upper jaw with narrow, erect to oblique, high cusps and distal cusplets except for those at symphysis, entirely smooth-edged; teeth in lower jaw with arced roots and long, hooked, slender, mostly erect cusps that prominently protrude when mouth is closed, without cusplets or serrations. First dorsal fin moderately large, with a pointed or narrowly rounded apex and short inner margin, its origin slightly posterior to free rear tips of pectorals and the free rear tip anterior to pelvic fin origins; second dorsal fin high, about 2/3 of length of first, with a short inner margin less than fin height, and its origin slightly anterior to anal fin origin; pectoral and pelvic fins with straight or slightly concave inner margins; anal fin slightly smaller than second dorsal fin, without long preanal ridges; upper precaudal pit transverse and crescentic, no. keels on caudal peduncle. Intestine with a spiral valve.

Colour: bronzy-grey above, white below when fresh, fading to greyish or greyish-brown in preservation, dorsal fins often with dusky or black tips.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Hemipristis elongatus: snout bluntly rounded toward tip; upper teeth more triangular with serrated, more curved mesial margins (except in young below 60 cm); lower teeth with stouter cusps, basal cusplets and partial serrations; pectoral and pelvic fins strongly falcate, with deeply concave posterior margins.



Hemipristis elongatus

Hemigaleus microstoma: snout tip broadly rounded, upper labial furrows nearly reaching lower symphysis; longest gill openings less than twice the eye length; mouth very short and arcuate; teeth in upper jaw with very short cusps; lower teeth very small, with short, erect cusps that do not protrude when mouth is closed; dorsal fins more falcate, pectoral and pelvic fins strongly falcate, with deeply concave posterior margins, dorsal fins with white edges; often white spots on body.

Paragaleus species: mouth shorter and less narrowly arched; upper labial furrows nearly reaching lower symphysis; teeth in upper jaw with moderately long cusps; lower teeth smaller, with transverse roots and distal cusplets, cusps not or hardly protruding when mouth is closed; pectoral fins slightly more falcate; 2 dark lines on underside of snout tip.

Small species of the family Carcharhinidae: intestine valve of scroll type; also, no small carcharhinid combines the characters of long snout, spiracles, upper teeth smooth-edged but with distal cusplets, lower teeth strongly hooked and prominently protruding, long labial furrows, and second dorsal fin about 2/3 of size of first dorsal fin and with its origin anterior to that of the slightly smaller anal fin.

SIZE:

Maximum: reported about 100 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

In the area, restricted to the northeast, from the "Gulf" to Pakistan, India and probably Sri Lanka. Elsewhere in the Eastern Indian Ocean and the Western Central Pacific extending eastward to Thailand, Taiwan Island and Indonesia.

A small, common, coastal, inshore and offshore shark of continental waters. Viviparous, number of young 4; size at birth 20 cm.

Probably eats small fishes and invertebrates; harmless to people.

PRESENT FISHING GROUNDS:

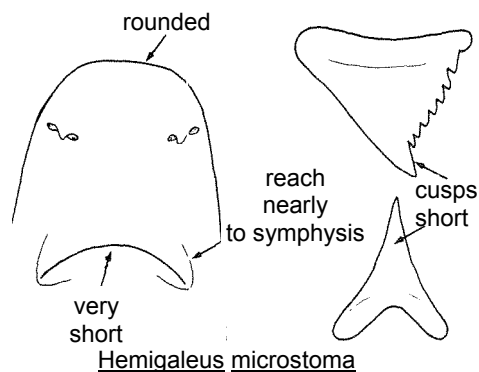
Off Pakistan, India and Sri Lanka.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

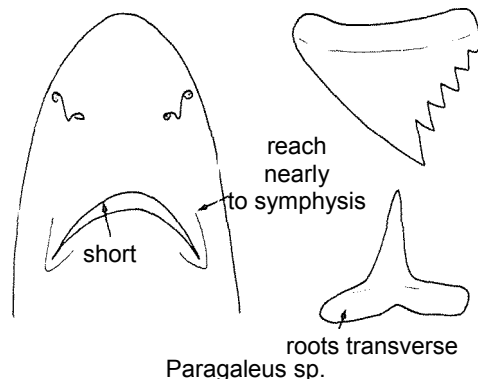
Separate statistics are not reported for this species.

Caught in drifting and bottom gillnets and on longlines and other line gear.

Utilized fresh for human consumption; offal processed into fishmeal.



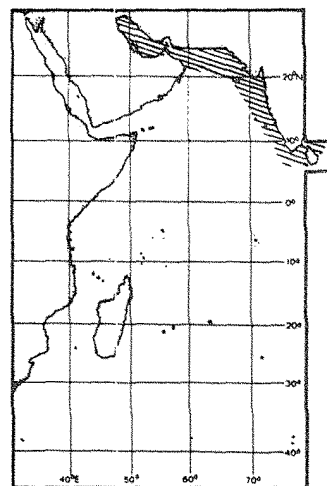
Hemigaleus microstoma



Paragaleus sp.

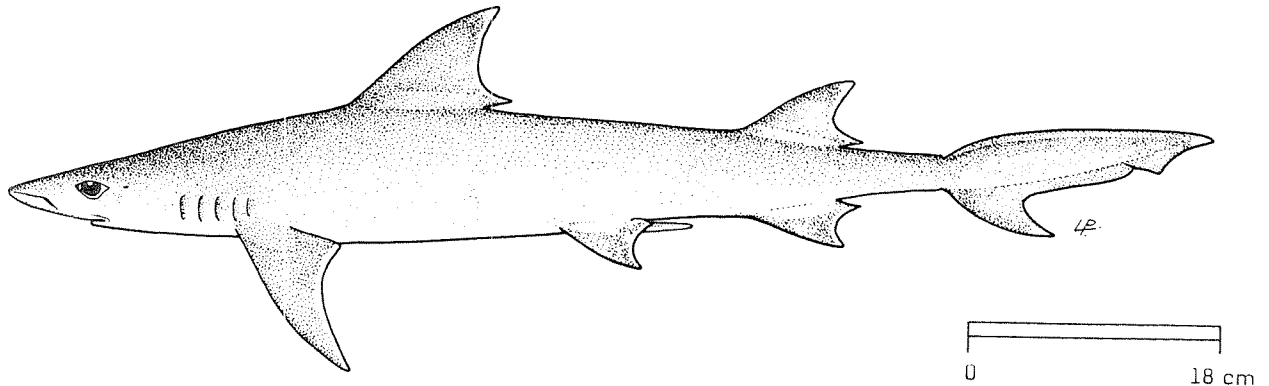


Chaenogaleus macrostoma



FAO SPECIES IDENTIFICATION SHEETS

FAMILY: HEMIGALEIDAE

FISHING AREA 51
(W. Indian Ocean)Hemigaleus microstoma Bleeker, 1852OTHER SCIENTIFIC NAMES STILL IN USE: Negogaleus microstoma (Bleeker, 1852)

VERNACULAR NAMES:

FAO : En - Sicklefins weasel shark
Fr - Milandre faucille
Sp - Comadreja segadora

NATIONAL:

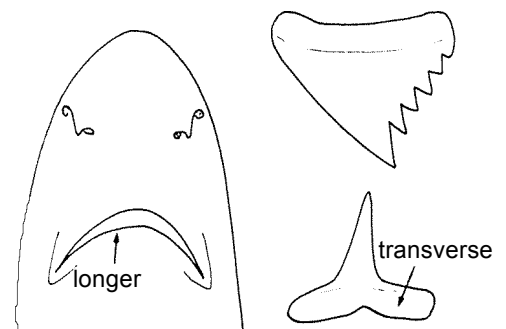
DISTINCTIVE CHARACTERS:

A small shark. Body moderately slender; snout long, its length somewhat greater than mouth width, parabolic toward tip; labial furrows moderately long and easily seen, the uppers nearly reaching symphysis of lower jaw; anterior nasal flaps with a short, broad, triangular lobe; mouth very short and broadly arched, its length about 1/3 of the width; spiracles present, small; gill openings short, the longest slightly longer than eye length in adults, slightly shorter in young; teeth in upper jaw with very narrow, short, oblique cusps and prominent distal cusplets (except for those at symphysis), entirely smooth-edged; teeth in lower jaw very small, with arched roots and short, mostly erect, slender, straight cusps that do not protrude when mouth is closed, and no cusplets or serrations. First dorsal fin moderately large, with a pointed apex and short inner margin, its origin slightly posterior to free rear tips of pectorals and the free rear tip anterior to pelvic fin origins; second dorsal fin high, about 2/3 of length of first dorsal, with a short inner margin less than fin height, and its origin slightly anterior to anal fin origin; pectoral and pelvic fins strongly falcate, with deeply concave posterior margins; anal fin slightly smaller than second dorsal fin, without long preanal ridges; upper precaudal pit transverse and crescentic, no keels on caudal peduncle. Intestine with a spiral valve.

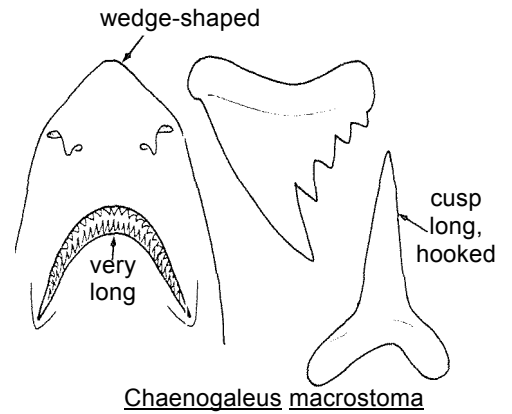
Colour: grey-brown above, lighter below, dorsal fins with white tips and posterior margins; sometimes white spots on sides of body.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

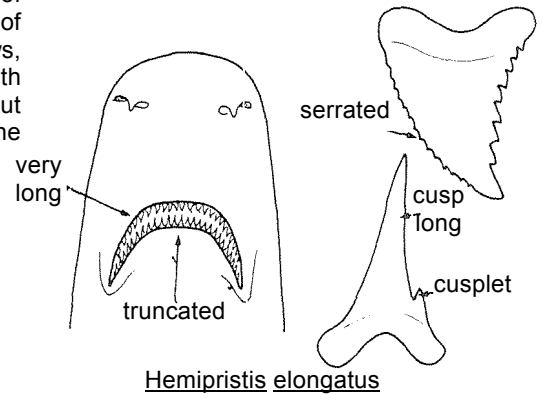
Paragaleus species: mouth somewhat longer; teeth in upper jaw with longer cusps, those in lower jaw with transverse roots and some distal cusplets; fins less falcate; no white spots and white posterior margins on fins; 2 dark lines on underside of snout tip.

Paragaleus sp.

Chaenogaleus macrostoma: snout tip obtusely wedge-shaped; upper labial furrows ending far behind symphysis of mouth; longest gill openings over twice the eye length; mouth very long and parabolic; teeth in both jaws with long cusps, those of lower teeth hooked and strongly protruding when mouth is closed; fins hardly falcate, without white posterior margins; dorsal fins usually with dusky tips; no white spots on body.



Hemipristis elongatus: upper labial furrows ending far behind symphysis of mouth; longest gill openings over twice the eye length; mouth long and parabolic, with a truncated lower symphysis; teeth of both jaws with long cusps, those in upper jaw curved distally and with a serrated mesial margin; those in lower jaw strongly protruding when mouth is closed, and with basal cusplets and serrations on some teeth; fins without white posterior margins; no spots on body.



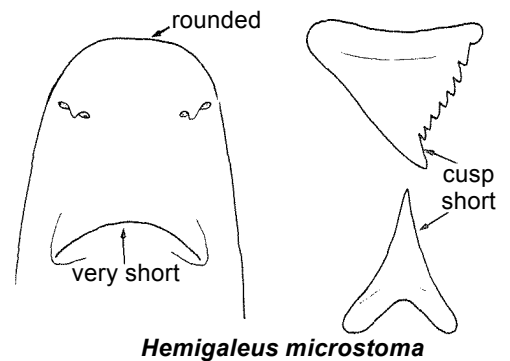
Small species of the family Carcharhinidae: intestine valve of scroll type; also, no small carcharhinid combines the characters of long snout, spiracles, extremely short mouth, long labial furrows, upper teeth smooth-edged and with distal cusplets, lower teeth smooth-edged and with deeply arched roots, and second dorsal about 2/3 of size of first dorsal and with its origin anterior to that of the slightly smaller anal fin.

SIZE:

Maximum: at least 91 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

In the area, known only from southern India and Sri Lanka. Elsewhere, in the Eastern Indian Ocean and Western Central Pacific, ranging eastward to China, Japan, Thailand, Indonesia and Australia.



A small coastal, inshore and offshore shark of continental tropical waters. Viviparous, 2 fetuses in a litter.

Feeds on small fish and cephalopods. Harmless to humans.

PRESENT FISHING GROUNDS:

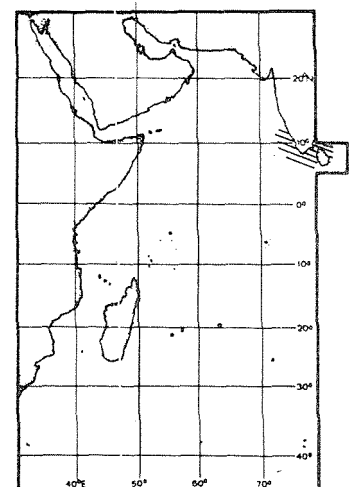
Off southern India and Sri Lanka.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

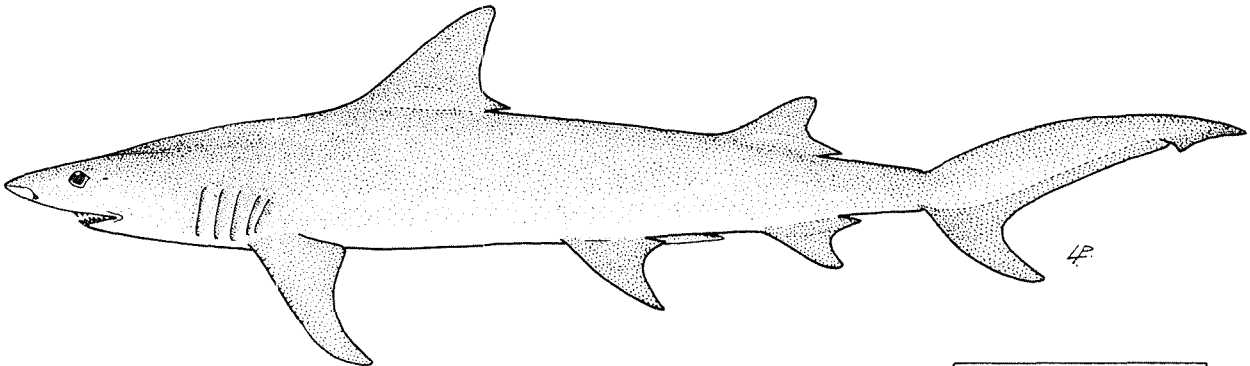
Caught with floating and bottom gillnets, longlines and hook and line.

Utilized fresh for human consumption; offal used for fishmeal.



FAO SPECIES IDENTIFICATION SHEETS

FAMILY: HEMIGALEIDAE

FISHING AREA 51
(W. Indian Ocean)Hemipristis elongatus (Klunzinger, 1871)OTHER SCIENTIFIC NAMES STILL IN USE: Carcharhinus ellioti (Day, 1878)

VERNACULAR NAMES:

FAO: En - Snaggletooth shark
Fr - Milandre chicor
Sp - Comadreja sobrediente

NATIONAL:

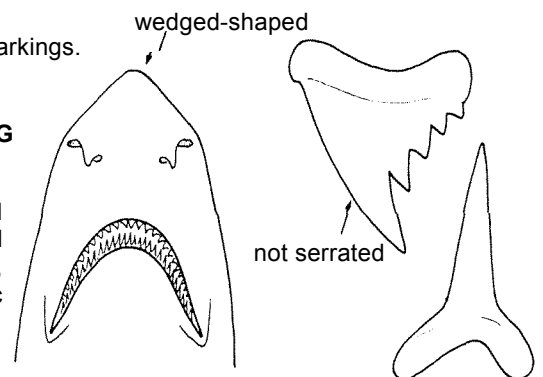
DISTINCTIVE CHARACTERS:

A medium-sized shark. Body moderately slender; snout long, slightly greater than mouth width, bluntly rounded toward tip; labial furrows moderately long and easily seen, the uppers falling well behind symphysis of lower jaw; anterior nasal flaps with a short triangular lobe; mouth long and semiparabolic, with a truncated lower symphysis, its length about 2/3 of the width; spiracles small; gill openings long, the longest over twice the eye length; teeth in upper jaw with strong, distally curved, broad and oblique cusps (except for erect-cusped symphyseal teeth), prominent distal cusplets and mesial serrations; teeth in lower jaw large but considerably narrower than uppers, with arched roots and long, strong, hooked, erect to oblique cusps that prominently protrude when mouth is closed, and basal serrations or small cusplets on more distal teeth. First dorsal fin moderately large, with a pointed apex and short inner margin, its origin slightly posterior to free rear tips of pectorals and the free rear tip anterior to pelvic fin origins; second dorsal fin high, about 2/3 of length of first, with a short inner margin less than fin height and its origin somewhat anterior to anal fin origin; pectoral and pelvic fins strongly falcate, with deeply concave posterior margins; anal fin slightly smaller than second dorsal fin, without long preanal ridges; upper precaudal pit transverse and crescentic; no keels on caudal peduncle. Intestine with a spiral valve.

Colour: grey or grey-brown above, lighter below, no prominent markings.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Chaenogaleus macrostoma: snout obtusely wedge-shaped toward tip; mouth with lower symphysis more rounded; upper and lower teeth with slender cusps, the uppers without mesial serrations, the lowers without serrations or cusplets; dorsal, pectoral and pelvic fins less falcate, with less concave posterior edges.

Chaenogaleus macrostoma

Hemigaleus microstoma and Paragaleus species: upper labial furrows nearly reaching symphysis of lower jaw; mouth short to very short and moderately to broadly arched, without a truncate lower symphysis; gill openings shorter, the longest less than twice the eye length; teeth with narrow cusps and no serrations in upper jaw, short-cusped, not hooked, and not protruding when mouth is closed.

The combination of moderately long labial furrows, long snout with a bluntly rounded tip, nictitating eyelids, small spiracles, long, large mouth with characteristic teeth protruding from it, first dorsal fin over interspace between pectoral and pelvic fins, strongly falcate fins, precaudal pits, absence of caudal keels, and intestinal valve of spiral type distinguishes this shark from all others in the area.

SIZE:

Maximum: reported about 218 to 240 cm, most adults below 200 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

In the area, scattered records from South Africa, Mozambique, Tanzania, Madagascar, the Red Sea and India. Elsewhere, in the Eastern Indian Ocean/Western Central Pacific, ranging eastward to Thailand, Vietnam, China and Australia.

A coastal, inshore, to offshore, tropical shark, common off India but otherwise rather rare in the area. Viviparous, number of young 6 to 8 per litter; size at birth about 45 cm.

Feeds on inshore pelagic and bottom fishes, including mackerel, other sharks, and rays. Not recorded as being involved in attacks on people, but regarded as potentially dangerous because of its size and large, formidable teeth.

PRESENT FISHING GROUNDS:

Off India, inshore and offshore.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught with floating and fixed bottom gillnets, floating long-lines and probably on hook and line.

Utilized fresh for human consumption, and considered one of the best sharks for this purpose; liver processed for vitamins; fins used in the oriental sharkfin trade; and offal for fishmeal.

