TRIAK

1983

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Indian Ocean)

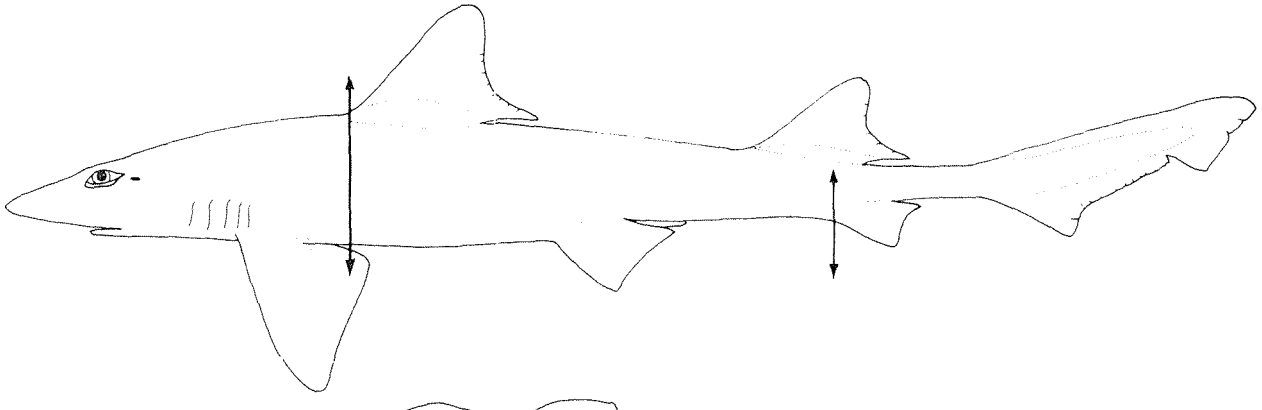
TRIAKIDAE*

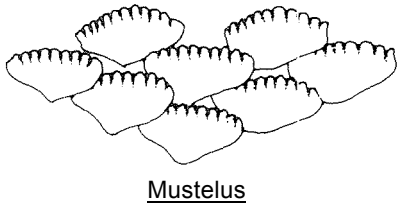
Houndsharks, smoothhounds, topes

Body elongate and slender to moderately stout. Head with 5 gill slits, the last pair posterior to pectoral fin origins; small spiracles present; gill arches without rakers; eyes horizontally oval, situated on or above sides of head, with a nictitating eyelid partly or entirely within the eye opening; anterior nasal flaps of nostrils either broadly to narrowly expanced or greatly reduced, but not in the form of slender barbels; teeth either numerous, small, cuspless (or weak-cusped) arranged in a pavement (Mustelus) or larger, bladelike, with a strong cusp and small cusplets but no serrations (Galeorhinus); mouth ending below or posterior to eyes; labial furrows moderately long. Two dorsal fins, the first much shorter than caudal fin and with its base entirely anterior to pelvic fins: second dorsal fin somewhat smaller than the first, originating ahead of anal fin; anal fin as large as or smaller than the second dorsal; caudal fin asymmetrical, its lower lobe varying from virtually absent to strong, its upper edge not rippled. Caudal peduncle not flattened dorso-ventrally or expanded laterally, without keels or precaudal pits. Intestine with a corkscrew or auger-like spiral valve, with 6 to 10 turns.

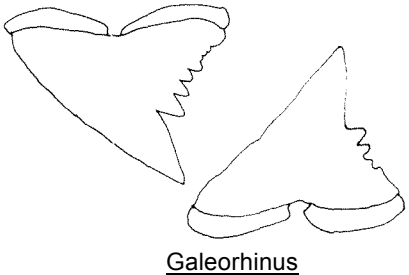
Colour: back usually greyish brown, belly white. Some species are capable of undergoing slow colour changes.

Houndsharks are widely distributed in tropical and warm temperate to cold seas, ranging from shallow to moderately deep waters (300 m or more). They feed on bottom-dwelling invertebrates (especially crustaceans, but also molluscs and worms), and also on small bony fishes and fish egos. Smoothhounds (Mustelus) and topes or soupfin sharks (Galeorhinus) are important commercial species, but only the former are widely utilized in the area. Species of Mustelus, Triakis, Scylliogaleus, Galeorhinus, and Hypogaleus are hooked by sportsfishermen off South Africa and southern Mozambique, but little-utilized for food or other purposes. Separate statistics are not reported for this family.





Mustelus



Galeorhinus

teeth

spiral valve of intestine

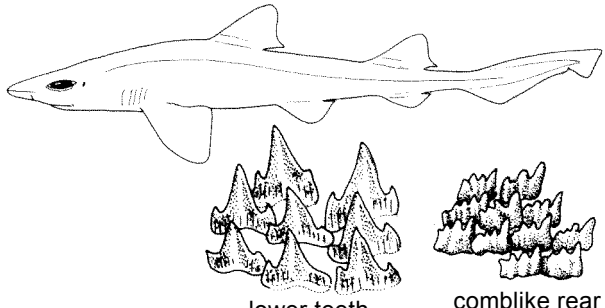
*Family diagnosis only applies to species present in the area

SIMILAR FAMILIES OCCURRING IN THE AREA:

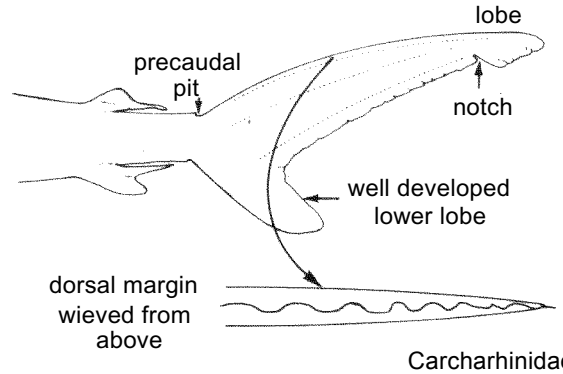
Carcharhinidae and Hemigaleidae: upper edge of caudal fin with a rippled or undulating margin; precaudal pits present; teeth more or less unlike in upper and lower jaws (for the species in the area). Furthermore, Carcharhinidae with an intestinal valve of scroll type.

Proscylliidae: gillraker papillae present on internal gill openings; nictitating lower eyelids not well developed, of rudimentary type, with a weaker subocular pocket and a poorly differentiated secondary lower eyelid edge; teeth with slender cusps, comblike at ends of dental hands; first dorsal fin base in species in the area more posterior, closer to the pelvic than to the pectoral fin bases.

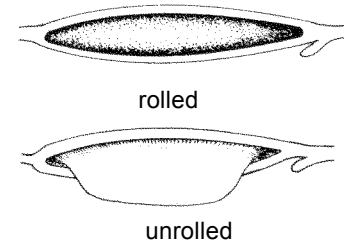
No other sharks in the area combine nictitating lower eyelids, small spiracles, mouth under the eyes, well-developed labial furrows, 2 spineless dorsal fins with the first over the interspace between the pectoral and pelvic fins, no precaudal pits, and an anal fin.



Proscylliidae



Carcharhinidae



intestinal valve of scroll type
Carcharhinidae

KEY TO GENERA AND SPECIES OCCURR[NG IN THE AREA:

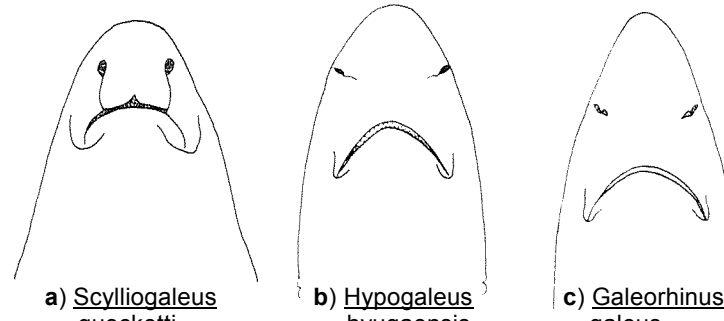
1a. Anterior nasal flaps very large, meeting each other at midline of snout and overlapping mouth posteriorly; nasoral grooves present between nostrils and mouth (Figs 1a, 2) ..... Scylliogaleus quecketti

1b. Anterior nasal flaps smaller, widely spaced from each other and not meeting mouth; no nasoral grooves (Figs 1 b,c,7)

2a. Ventral caudal fin lobe very long at all stages; second dorsal fin markedly smaller than first, half its area or less (Figs 3,4); nostrils with rudimentary anterior nasal flaps (Figs 1b,c)

3a. Mouth angular, with lower teeth protruding from mouth (Fig.1b); second dorsal fin considerably larger than anal fin; terminal lobe of caudal fin about a third of length of dorsal caudal fin margin (Fig.3) ..... Hypogaleus hyugaensis

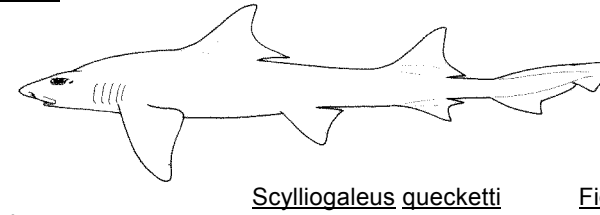
3b. Mouth arcuate, with lower teeth not protruding from mouth (Fig.1e); second dorsal fin about as large as anal fin; terminal lobe of caudal fin about half the length of dorsal caudal fin margin (Fig.4) ..... Galeorhinus galeus



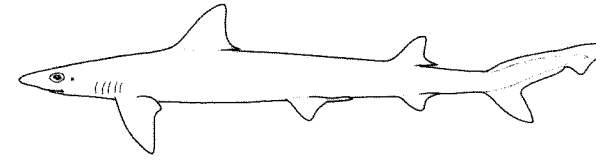
a) Scylliogaleus quecketti **b**) Hypogaleus hyugaensis **c**) Galeorhinus galeus

underside of head

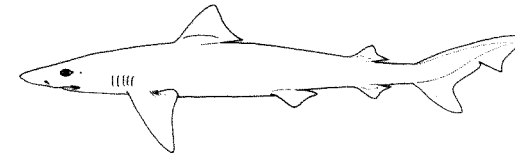
Fig.1



Scylliogaleus quecketti Fig.2

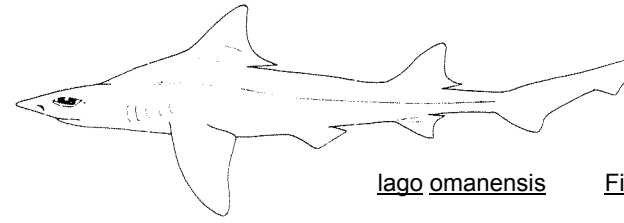


Hypogaleus hyugaensis Fig.3



Galeorhinus galeus Fig.4

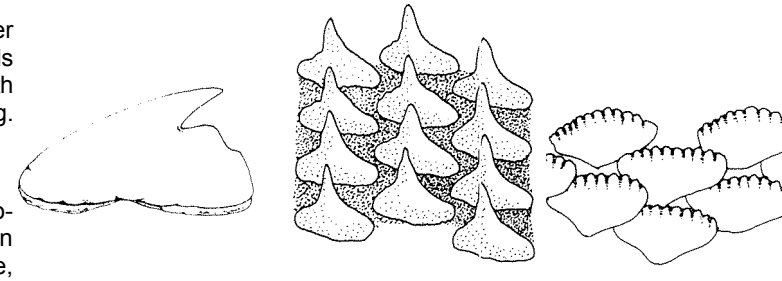
2b. Ventral caudal fin lobe absent or short in adults, weak or absent in young; second dorsal fin nearly as large as first, 2/3 or more of its area (Figs 5,8,9,10); nostrils with short anterior nasal flaps (Fig.7)



lago omanensis Fig.5

4a. Origin of first dorsal fin far forward, over pectoral fin bases (Fig.5); teeth compressed and bladelike (Fig.6a); subocular ridge obsolete ..... lago omanensis and lago species

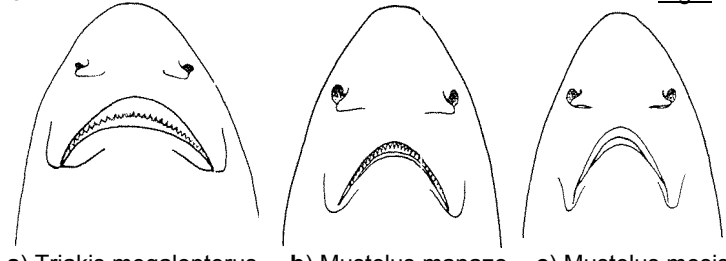
4b. Origin of first dorsal fin further back, over inner margins of pectorals or behind them (Figs 8,9,10); teeth not compressed and bladelike (Fig. 6b,c); subocular ridge strong.



a) lago omanensis **b**) Triakis megalopterus **c**) Mustelus sp. Fig.6

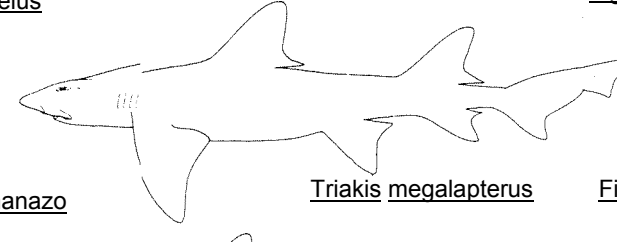
5a. Snout bluntly rounded in dorsoventral view; thick and blunt in lateral view; mouth arcuate, lower jaw with convex edges (Fig.7a); teeth with stout cusps (Fig.6b); body often with black spots (Fig.8) ..... Triakis megalopterus

5b. Snout parabolic in dorsoventral view, angular and pointed in lateral view; mouth angular, lower jaw with straight or nearly straight edges (Fig.7b,c); teeth with cusps absent or virtually so (Fig.6c); body without black spots (Figs 9,10) ..... Mustelus



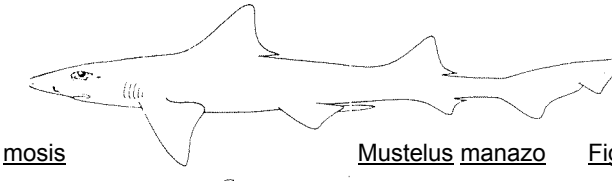
a) Triakis megalopterus **b**) Mustelus manazo **c**) Mustelus mosis underside of head Fig.7

6a. Upper labial furrows noticably longer than lowers (Fig.7b); body usually with numerous white spots on its dorsal surface (Fig.9) ..... Mustelus manazo

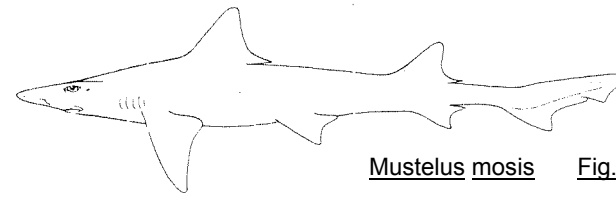


Triakis megalapterus Fig.8

6b. Upper labial furrows about as long as or slightly longer than lowers (Fig.7c); body unspotted (Fig.10) ..... Mustelus mosis



Mustelus manazo Fig.9



Mustelus mosis Fig.10

LIST OF SPECIES OCCURRING IN THE AREA:

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

*?	Galeorhinus galeus (Linnaeus, 1758)	
	Hypogaleus hyugaensis (Miyosi, 1939)	TRIAK Hypo 1
	Iago omanensis (Norman, 1939)	TRIAK Iago 1
**	Iago species	
***	Mustelus manazo Bleaker, 1854	TRIAK Must 6
	Mustelus mosis Hemprich & Ehrenberg, 1899	TRIAK Must 7
	Scylliogaleus quecketti Boulanger, 1902	TRIAK Scyl 1
*?	Triakis megalopterus (Smith, 1849)	

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*Including 2 species, Galeorhinus galeus and Triakis megalopterus, that occur in the Cape region of South Africa but which might intrude into the area from the south

**A new species from the Arabian Sea and southwestern India, to be described by the writer

***Mustelus species after unpublished work by Or Phillip C. Heemstra (1973 Ph.D. thesis and pers. comm.). Mustelus species from the area are usually described to M. manazo, but the common species of Mustelus in the northern part of the area from the Red Sea to India and Sri Lanka is M. mosis; and M. manazo, contrary to many references in the literature, is not currently known from these waters. However, the South African shark M. palumbes Smith, 1967 is apparently a junior synonym of Mustelus manazo, which extends the range of the latter from the Western Pacific and Eastern Indian Ocean into the area (P.C. Heemstra, 1973, Ph.D. thesis and pers. comm.). Apart from the characters presented in the key, Mustelus mosis also differs from M. manazo in having a number of hypercalcified skeletal structures, most prominently the rostrum (the hypercalcified rostral mass can be located in this species by pinching the snout); and in being viviparous, with a yolk-sac placenta (M. manazo is ovoviviparous). In addition, an eastern Atlantic species of Mustelus, M. mustelus (Linneaus, 1758 reaches the Cape of Good Hope, South Africa, but is riot definitely known to occur in the area. It is similar to M. mosis but differs in not having a hypercalcified rostrum, averaging more precaudal vertebral centra, and in having the palate covered with denticles posteriorly only to the spiracular apertures and the mouth floor with denticles only on tongue tip (reaching at least to the first gill slits on the palate and at least to the third gill slits on the mouth floor in M. mosis)

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