CARCH

1983

FAO SPECIES IDENTIFICATION SHEETS

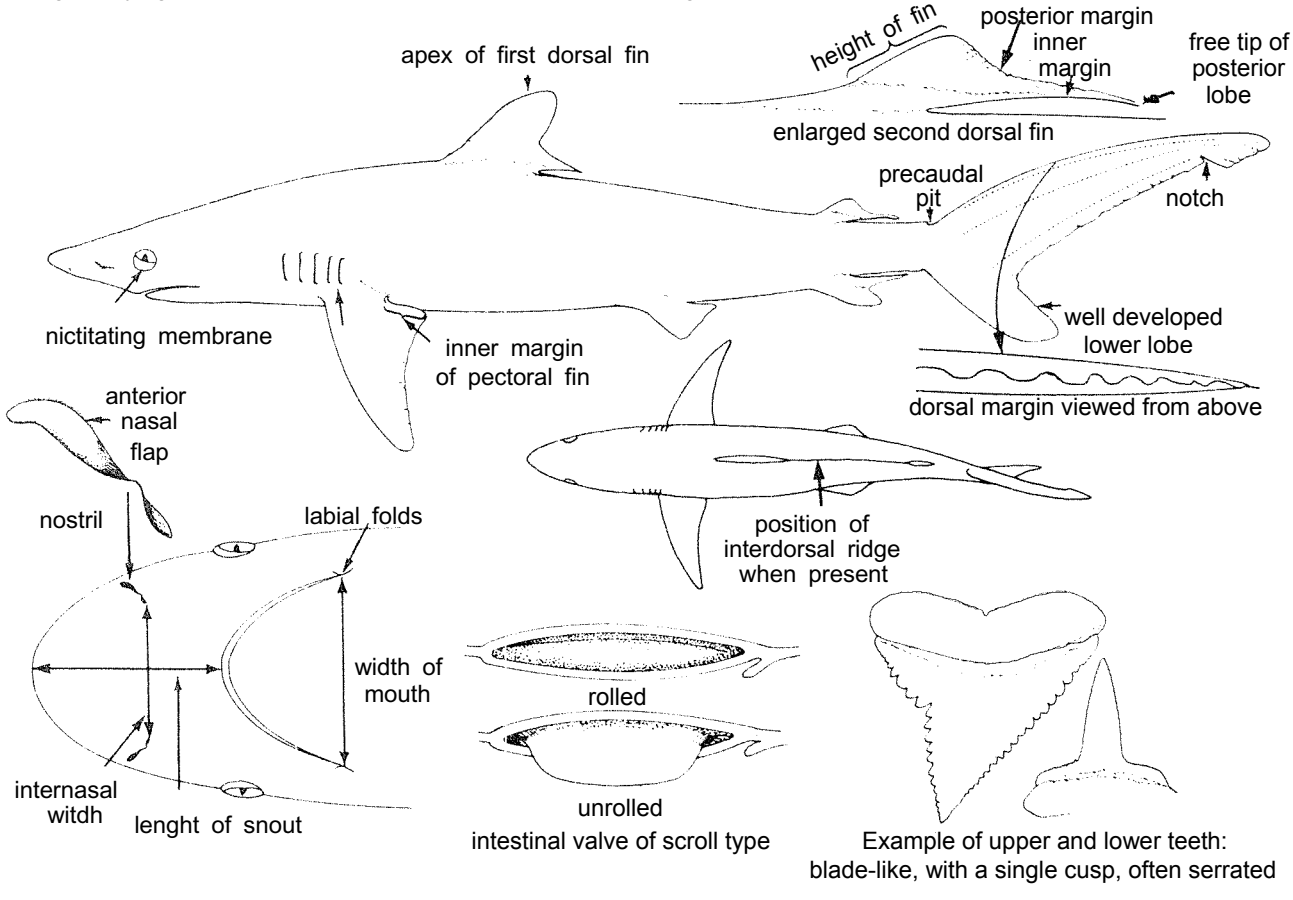
FISHING AREA 51
(W. Indian Ocean)

CARCHARHINIDAE*

Requiem sharks

(also, ground sharks, blue sharks, sharpnose sharks)

Small to large sharks. Trunk and precaudal tail cylindrical, not depressed and without lateral ridges; precaudal tail much shorter than trunk. Head not expanded laterally, conical to moderately depressed; 5 small- to medium-sized gill slits present, the last 1 to 3 over or behind pectoral fin origins, their upper ends not expanded onto dorsal surface of head; no gill sieves and usually no gillrakers on internal gill slits (short dermal gillrakers present in Prionace); spiracles usually absent (but always present in Galeocerdo); nostrils well-separated from mouth, without barbels, nasoral grooves, or circumnarial grooves; eyes on sides of head, with a well-developed nictitating lower eyelid; snout short to moderately long, conical and slightly pointed to depressed and broadly rounded, never greatly flattened and bladelike and without lateral teeth and barbels; mouth usually large, arched and elongated, and extending well behind eyes; labial furrows usually present on both jaws but generally greatly reduced, confined to mouth corners, and barely visible when mouth is closed (but Galeocerdo and some Rhizoprionodon species have well-developed labial furrows); upper labial furrows usually not reaching front of mouth (except in Galeocerdo); teeth small to large, blade-like, with a single cusp and cusplets variably developed; 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 moderately large, high and angular or subangular, much shorter than the caudal fin, its base located over the interspace between pectoral and pelvic fin bases and entirely anterior to origins of pelvic fins (free rear tip of dorsal may reach or extend posterior to pelvic origins in Scoliodon, Negaprion, Rhizoprionodon, and Triaenodon); second dorsal fin varying from less than a fifth the height of the first dorsal to about as high as the first (Lamiopsis and Negaprion); anal fin present, moderately large, with its origin varying from somewhat anterior to the second dorsal origin to under the first half of second dorsal base;



*Diagnosis applies only to Western Indian Ocean representatives

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 not strongly depressed dorsoventrally or widely expanded laterally, with weak longitudinal keels Prionace, Galeocerdo or none, precaudal pits present and well-developed. Intestinal valve of scroll type.

Colour: brown, grey, yellowish or bluish above, white to cream or yellowish below, some species with prominent dark or light markings on fins; body usually without a prominent colour pattern (except for Galeocerdo).

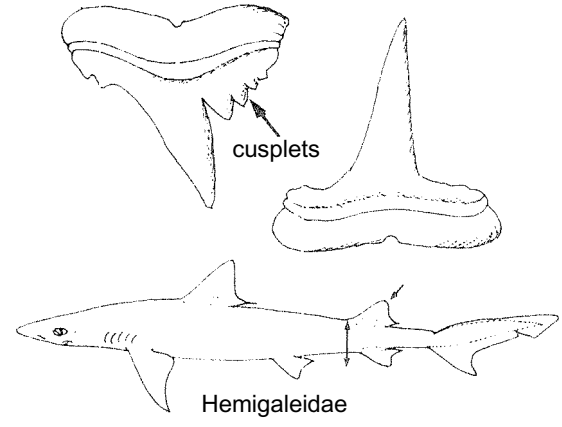
The Carcharhinidne are one of the largest families of sharks. All of the Western Indian Ocean representatives are strong swimmers, but the habits of a number of species, especially those that occur in the northeastern part of the area, are not well known. Small to very large species often occur close inshore, but most large ones are more abundant well offshore, but still near or over the continental or insular shelves. A few species, including the blue, silky and oceanic whitetip sharks, are truely oceanic. All are voracious predators, feeding heavily on bony fishes, other sharks, rays, squid, octopi, cuttlefishes, crabs, lobsters, and shrimp, but also sea birds, turtles, sea snakes, marine mammals, gastropods, bivalves, and carrion. The larger carcharhinids are dangerous to people, and they make up an important fraction of the shark species known to hove attacked people. In the Western Indian Ocean, this is by far the most important shark family for fisheries, and various species figure prominently in catches within the area. Most are utilized for human food, but also for the preparation of various subproducts, including oil and Vitamin A from the liver, fishmeal, and fins for the oriental soupfin market. Separate statistics by species are not available and the total catch of carcharhinids reported to FAO from within the area exceeds 20 000 t/year (effective catch probably much higher).

SIMILAR FAMILIES OCCURRING IN THE AREA:

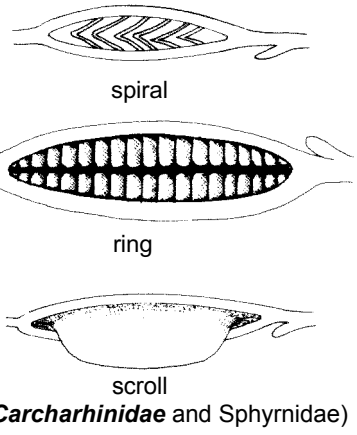
Hemigaleidae: intestinal valve of spiral type; also, no carcharhinids in the area combine the characters of long snout, spiracles, upper teeth with strong distal cusplets, long labial furrows, and second dorsal fin large, about 2/3 as large as first dorsal fin, with a very short inner margin, and with its origin anterior to that of the slightly smaller anal fin.

Proscylliidae and Triakidae: no precaudal pits, dorsal margin not undulated, intestinal valve of spiral type, eyes usually dorsolateral on head (except for Iago, Hypogaleus and Galeorhinus).

Other shark families: intestinal valve of spiral or ring type.

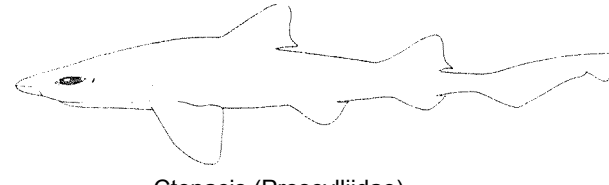


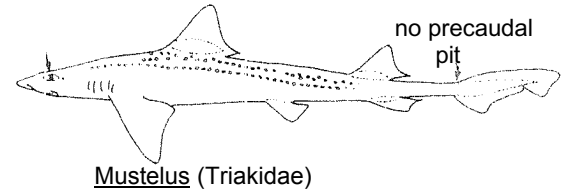
Hemigaleidae



(only ***Carcharhinidae*** and Sphyrnidae)

types of intestinal valve


Ctenacis (Proscylliidae)



Mustelus (Triakidae)

KEY TO GENERA OCCURRING IN THE AREA:

1a. Upper labial furrows very long, extending in front of eyes; spiracles present and relatively large; teeth in characteristic cockscomb shape; a prominent dermal keel on caudal peduncle (Fig.1); vertical black or dusky bars on back, obscure or absent in adults ..... Galeocerdo

1b. Upper labial furrow long to very short, not extending in front of eyes; spiracles usually absent, small ones occasionally present (Loxodon, Negaprion, Triaenodon); teeth varied but not cockscomb-shaped; usually no dermal keel on caudal peduncle (Prionace has a low one): no vertical bars on back

2a. High cusplets on either side of primary cusps of upper and lower teeth; anterior and median nasal flaps forming a short tube (Fig.2) ..... Triaenodon

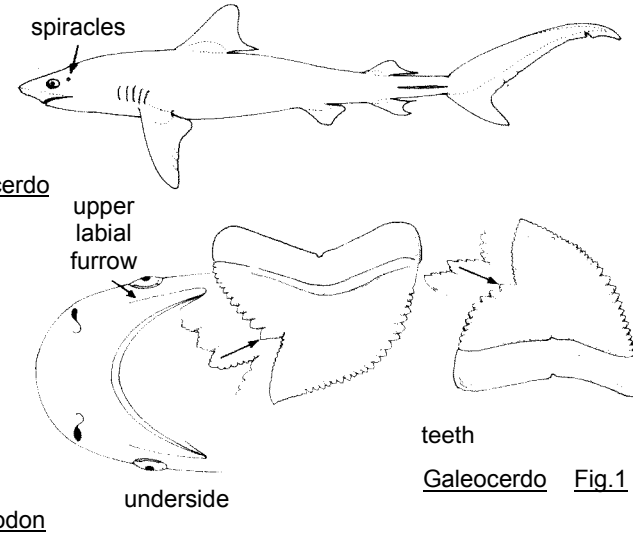
2b. Cusplets usually absent on lower teeth, low or absent on uppers; nasal flaps not forming a tube

3a. Second dorsal fin nearly or quite as large as first dorsal

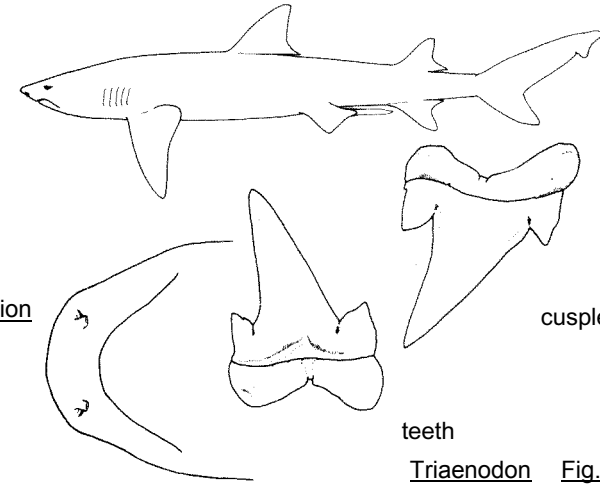
4a. Snout short, preoral length much less than mouth width; upper and lower teeth similar in shape, both with narrow, smooth-edged cusps (Fig.3)... Negaprion

4b. Snout longer, preoral length about equal to mouth width; upper and lower teeth very different, uppers with broadly triangular, serrated cusps, lowers with narrow, smooth cusps (Fig.4) ..... Lamiopsis

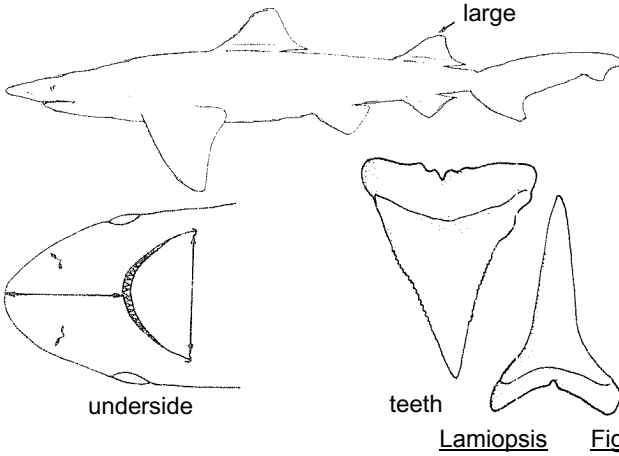
3b. Second dorsal fin considerably smallér than first dorsal



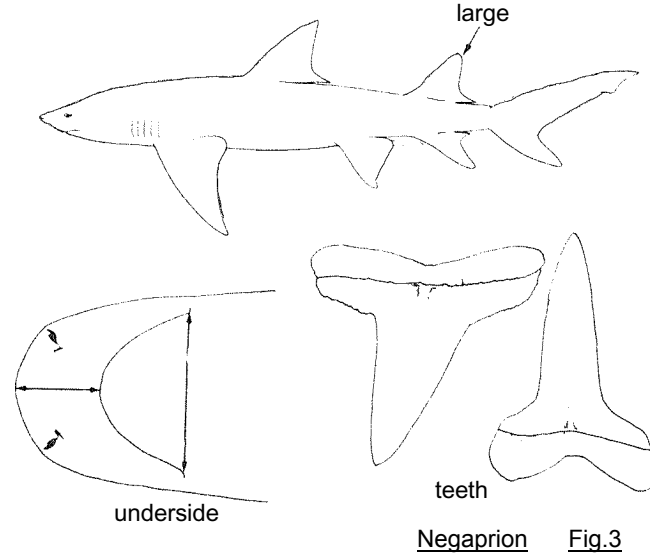
Galeocerdo Fig.1



Triaenodon Fig.2

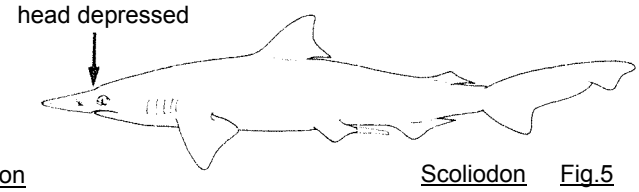


Lamiopsis Fig.4



Negaprion Fig.3

5a. Head greatly depressed and trowel-shaped; pectoral fins broadly triangular and very long; their length from origins to free rear tips about equal to their anterior margins; free rear tip of first dorsal extending behind pelvic fin origins and usually about over their mid-bases; posterior margin of caudal fin not deeply incised (Fig.5) ..... Scoliodon

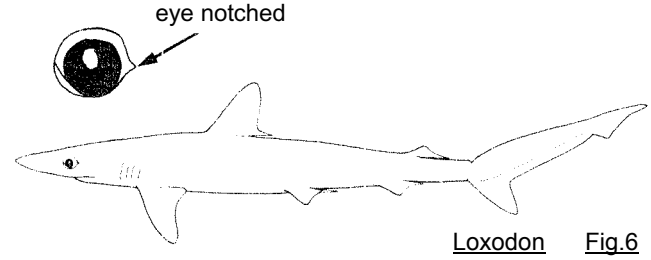


Scoliodon Fig.5

5b. Head moderately depressed to conical; pectoral fins narrower; their length 4/5 or less of anterior margins; free rear tip of first dorsal reaching at most to pelvic fin origins to (usually well anterior to them); posterior margin of caudal fin deeply incised

6a. Second dorsal fin origin well behind anal fin origin, usually over or slightly anterior to anal fin insertion; preanal ridges extremely long (Figs 6,7)

7a. Posterior notches present on eyes; first dorsal fin base contained 2 or 3 times in distance between pectoral and pelvic bases (Fig.6)..... Loxodon

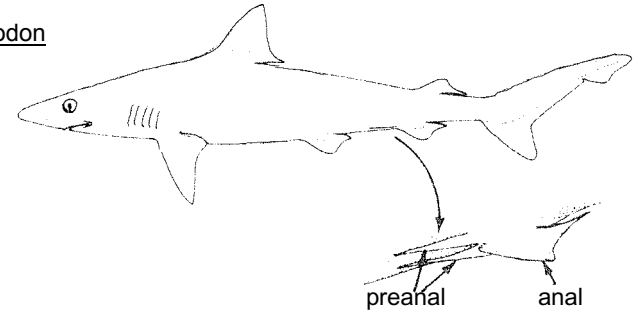


Loxodon Fig.6

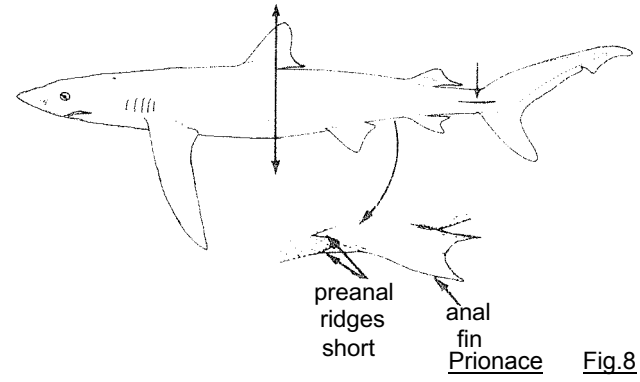
7b. No eye notches; first dorsal fin base usually less than 2 times in distance between pectoral to pelvic fin bases, but up to 2 times in adult R. acutus (Fig.7)..... Rhizoprionodon

6b. Second dorsal fin origin usually slightly in front, above or behind anal fin origin, in front of anal midbase; preanal ridges short to absent (Figs 8,9,10)

8a. Papilla-like gillrakers on gill arches; weak lateral keels on caudal peduncle; first dorsal fin base about 1.5 to 2 times farther from pectoral fin bases than from pelvic fin bases (Fig.8); colour brilliant dark blue above when alive .....Prionace



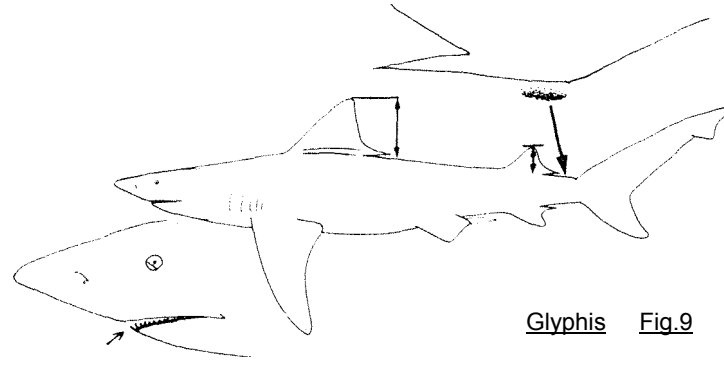
Rhizoprionodon Fig.7



Prionace Fig.8

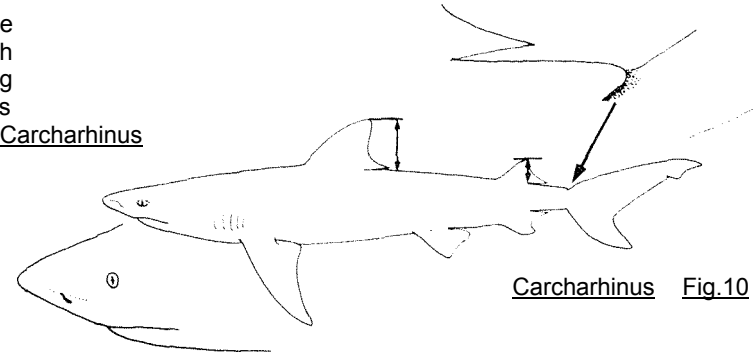
8b. No gillrakers or keels on caudal peduncle; first dorsal fin base equidistant between pectoral and pelvic fin bases or closer to pectoral fin bases (Figs 9,10); colour varied but not brilliant dark blue above when alive

9a. Second dorsal fin about half the height of first dorsal; lower teeth with very long, hooked cusps, prominently protruding when mouth is closed; precaudal pits in the form of horizontally oblong depressions, not. transverse and crescentic (Fig.9) ..... Glyphis*



Glyphis Fig.9

9b. Second dorsal fin less than half the height of first dorsal lower teeth with shorter, straight cusps, not protruding when mouth is, closed; precaudal pits transverse and crescentic (Fig.10) ..... Carcharhinus



Carcharhinus Fig.10

LIST OF SPECIES KNOWN FROM THE AREA:

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

Carcharhinus albimarginatus (Rüppell, 1337)	CARCH	Carch 17
Carcharhinus altimus (Springer, 1950)	CARCH	Carch 2
Carcharhinus amblyrhynchoides (Whitley, 1934)	CARCH	Carch 18
Carcharhinus amblyrhynchos (Bleeker, 1356)	CARCH	Carch 19
**Carcharhinus amboinensis (Müller&Henle,1839)	CARCH	Carch 14
Carcharhinus brachyurus (Günther, 1870)	CARCH	Carch 15
Carcharhinus brevipinna (Müller & Henle, 1839)	CARCH	Carch 3
Carcharhinus dussumieri (Valenciennes, in Müller & Henle, 1839)	CARCH	Carch 20
Carcharhinus falciformis (Bibron, in Müller & Henle, 1839)	CARCH	Carch 4
Carcharhinus galapagensis (Snodgrass & Heller, 1905)	CARCH	Carch 16
Carcharhinus hemiodon (Valenciennes, in Müller & Henle, 18139)	CARCH	Carch 21
Carcharhinus leucas (Valenciennes, in Müller & Henle, 1839)	CARCH	Carch 6
Carcharhinus limbatus (Valenciennes, in Müller & Henle, 1839)	CARCH	Carch 7
Carcharhinus longimanus (Poey, 1861)	CARCH	Carch 8
Carcharhinus macloti (Müller & Henle, 1839)	CARCH	Carch 22
Carcharhinus melanopterus (Quoy & Gaimard, 1824)	CARCH	Carch 23
Carcharhinus obscurua (LeSueur, 1818)	CARCH	Carch 9
Carcharhinus plumbeus (Nardo, 1827)	CARCH	Carch 11
Carcharhinus sealei (Pietschmann, 1916)	CARCH	Carch 24
Carcharhinus sorrah (Valenciennes, in Müller & Henle, 1839)	CARCH	Carch 25
Carcharhinus wheeleri Garrick, 1982	CARCH	Carch 26

* In a recent (1982) revision of the genus Carcharhinus, Prof. J.A.F. Garrick removed two species, Carcharias (Prionodon) gangeticus Müller & Henle, 1839 and Carcharias (Prionodon) glyphis Müller & Henle, 1839 from the genus, without further consideration of their placement. As these two species are rather distinct from Carcharhinus, and very similar to each other, they fall into a genus of their own, for which the name Glyphis Agassiz, 1843 is available (type species, C.(P.) glyphis by absolute tautonymy)

**Triaenodon obtusus Day, 1878 from Karachi, Pakistan is usually recognized as a valid species, but examination of its holotype revealed that the species was based on a term fetus of Carcharhinus amboinensis

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