

THE SHARKS OF SRI LANKA  
A KEY TO THE DIFFERENT SPECIES AND A  
PRELIMINARY CHECKLIST

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INTRODUCTION

The first part of this paper includes a simplified key to the various species of sharks known to inhabit the coastal waters of Sri Lanka up to an arbitrary limit of 16 kilometers from shore. Field marks have been used wherever possible and internal features have only been referred to when suitable external characteristics could not be found.

The keys are designed to enable most normal adult sharks to be fairly readily identified and in the interest of simplification they have not been expanded to include those juveniles which differ significantly from the adults. Variant individuals and populations are also not covered by the keys.

The checklist is in two parts. Part A includes all species which are known to occur in Sri Lankan coastal waters within the limits specified above. Part B includes those shark species which have not been reliably recorded from Sri Lanka to date, but which occur in nearby waters and therefore

could possibly turn up at any time.

The keys and checklist were compiled on the basis of information obtained from various sources including, Compagno (1984), Munroe (1955), Smith (1961), Rodney Jonklass (pers. comm.), the writer (De Silva 1977, 1978, 1986 and unpublished notes). The scientific nomenclature and common names are mainly after Compagno (1984).

#### A KEY TO THE SHARKS OF SRI LANKA

- |     |                                       |                                      |    |
|-----|---------------------------------------|--------------------------------------|----|
| 1.  | Seven pairs of gills present .....    | <u>Notorynchus</u> <u>cepedianus</u> |    |
|     | Five pairs of gills present .....     |                                      | 2  |
| 2.  | Anal fin present .....                |                                      | 3  |
|     | Anal fin absent .....                 | <u>Echinorhinus</u> <u>brucus</u>    |    |
| 3.  | Mouth well in front of eyes .....     |                                      | 4  |
|     | Mouth in line with or behind eyes ..  |                                      | 7  |
| 4.  | Caudal about half body length .....   | <u>Stegostoma</u> <u>fasciatum</u>   |    |
|     | Caudal less than half body length ..  |                                      | 5  |
| 5.  | Lateral keel/s on caudal peduncle .   | <u>Rhiniodon</u> <u>typus</u>        |    |
|     | No lateral keel/s on caudal peduncle  |                                      | 6  |
| 6.  | First dorsal fin behind pelvics.....  |                                      | 14 |
|     | First dorsal opposite pelvics .....   | <u>Nebrius</u> <u>ferrugineus</u>    |    |
| 7.  | Nictitating membranes present .....   |                                      | 10 |
|     | Nictitating membranes absent .....    |                                      | 8  |
| 8.  | Caudal approximately half body length | <u>Alopias</u> <u>vulpinus</u>       |    |
|     | Caudal less than half body length.... |                                      | 9  |
| 9.  | Caudal peduncle keeled .....          |                                      | 16 |
|     | Caudal peduncle not keeled .....      | <u>Eugomphodus</u> <u>taurus</u>     |    |
| 10. | Head normal .....                     |                                      | 11 |
|     | Head hammer-shaped .....              |                                      | 42 |
| 11. | Precaudal pits present .....          |                                      | 13 |
|     | Precaudal pits absent .....           |                                      | 12 |
| 12. | Posterior teeth comblike .....        | <u>Eridacnis</u> <u>radcliffei</u>   |    |
|     | Posterior teeth normal .....          | <u>Mustelus</u> <u>mosis</u>         |    |

13.	Intestine with spiral valve	.....	17
	Intestine with scroll valve	.....	19
14.	Lateral ridges on trunk	.....	15
	No lateral ridges on trunk	.... <u>Chiloscyllium griseum</u>	
15.	Body light with dark spots	.....	<u>C. indicum</u>
	Body dark with light spots	.....	<u>C. plagiosum</u>
16.	Upper teeth triangular and serrated	... <u>Carcharodon carcharias</u>	
	Teeth dagger-shaped and unserrated	..... <u>Isurus oxyrinchus</u>	
17.	Fins falcate, snout rounded	.....	18
	Fins not falcate, snout wedge-shaped	... <u>Chaenogaleus macrostoma</u>	
18.	Gill slits about 1.3 times eye length	... <u>Hemigaleus microstoma</u>	
	Gill slits about 3 times eye length	... <u>Hemipristis elongatus</u>	
19.	Caudal peduncle with keels	.....	20
	Caudal peduncle without keels	.....	21
20.	Large spiracles present, body striped	.....	<u>Galeocerdo cuvier</u>
	Spiracles absent, body blue	.....	<u>Prionace glauca</u>
21.	Nasal flaps form tubes for excurrent apertures, white tips to first dorsal and upper lobe of caudal	.....	<u>Triaenodon obesus</u>
	Nasal flaps do not form tubes	.....	22
22.	Second dorsal almost as large as first	.....	23
	Second dorsal much smaller than first	.....	24
23.	Snout short	.....	<u>Negaprion acutidens</u>
	Snout normal, pectorals broad	.....	<u>Lamiopsis temmincki</u>
24.	Head depressed, trowel-shaped	.....	<u>Scoliodon laticaudus</u>
	Head not depressed		25

25. Second dorsal origin varies from approximately above anal apex to anal insertion .....	26
Second dorsal originates noticeably anterior to anal apex .....	28
26. Posterior eye notch present .....	<u>Loxodon macrorhinus</u>
Posterior eye notch absent .....	27
27. Upper labial furrows short and inconspicuous .....	<u>Rhizoprionodon oligolinx</u>
Upper labial furrows long and conspicuous .....	<u>R. acutus</u>
28. First dorsal and pectorals with broad bases tapering slightly to broadly rounded fin tips .....	<u>Carcharhinus longimanus</u>
First dorsal and pectorals taper strongly to form pointed or narrowly rounded fin tips .....	29
29. One or more fins with conspicuous markings .....	30
All fins without conspicuous markings .....	39
30. Two or more fins have black markings .....	31
Only second dorsal has black markings .....	32
31. First dorsal tipped with black or white .....	33
First dorsal unmarked or exceptionally with very thin black posterior margin .....	37
32. First dorsal triangular .....	<u>C. dussumieri</u>
First dorsal falcate .....	<u>C. sealei</u>
33. First dorsal with white markings .....	<u>C. wheeleri</u>
First dorsal with black markings .....	34

34. Snout long or short but pointed .....	35
Snout rounded .....	<u>C. melanopterus</u>
35. Snout short .....	<u>C. amblyrhynchoides</u>
Snout long .....	36
36. Labial furrows long and conspicuous .....	<u>C. brevipinna</u>
Labial furrows short and inconspicuous .....	<u>C. limbatus</u>
37. Lower lobe of caudal fin black tipped .....	38
Lower lobe of caudal plain .....	39
38. Pectorals small, 12 rows of teeth in upper jaws .....	<u>C. sorrah</u>
Pectorals large, 14 to 15 rows of teeth in upper jaws .....	<u>C. hemiodon</u>
39. Second dorsal origin slightly anterior to or approximately opposite to anal origin .....	40
Second dorsal origin noticeably posterior to anal region .....	<u>C. macloti</u>
40. Interdorsal ridge present.....	41
Interdorsal ridge absent .....	<u>C. amboinensis</u>
41. First dorsal origin opposite or slightly posterior to pectoral insertion .....	<u>C. altimus</u>
First dorsal originates behind posterior margin of pectorals .....	<u>C. falciformis</u>
42. Lateral extensions of head narrow and long, 40 to 50% of body length. Nostrils almost twice mouth-width .....	<u>Eusphyra blochii</u>

Lateral extensions of head broad and short, not exceeding 30% of body length, nostrils less than half mouth-width .....	43	
43. Anterior margin of head curved .....	44	
Anterior margin of head almost straight .....		<u>Sphyrna mokarran</u>
44. Anterior margin of head with prominent median indentation .....		<u>S. lewini</u>
Anterior margin of head without prominent median indentation .....		<u>S. zygaena</u>

**Notes:**

- i) The number of teeth are indicated for one half of a jaw (in these keys the upper jaw) only.
- ii) The snout descriptions (i.e. rounded, pointed etc.) are applicable when viewed dorsoventrally.
- iii) The term "body length" refers to the total overall length from snout tip to caudal fin tip.

**A PRELIMINARY CHECKLIST OF THE SHARKS OF SRI LANKA****Part A****ORDER HEXANCHIFORMES****Family Hexanchidae**

- 1) Notorynchus cepedianus (Peron, 1807). Broadnose seven-gill shark.

**ORDER SQUALIFORMES****Family Echinorhinidae**

## SHARKS OF SRI LANKA

2. Echinorhinus brucus (Bonnaterre, 1788). Bramble shark.

## ORDER ORECTOLOBIFORMES

## Family Hemiscyllidae

3. Chiloscyllium griseum Muller & Henle, 1838. Grey bambooshark.  
 4. C. indicum (Gmelin, 1789). Slender bambooshark.  
 5. C. plagiosum (Bennett, 1830), Whitespotted bambooshark.

## Family Stegostomatidae

6. Stegostoma fasciatum (Hermann, 1783). Zebra shark.

## Family Ginglymostomatidae

7. Nebrius ferrugineus (Lesson, 1830). Tawny nurse shark.

## Family Rhiniodontidae

8. Rhiniodon typus Smith, 1828. Whale Shark.

## ORDER LAMNIFORMES

## Family Odontaspidae

9. Eugomphodus taurus (Rafinesque, 1810). Sandtiger Shark.

## Family Alopiidae

10. Alopias vulpinus (Bonnaterre, 1788). Thresher shark.

## Family Lamnidae

11. Carcharodon carcharias (Linnaeus, 1758). Great white shark.  
 12. Isurus oxyrinchus Rafinesque, 1809. Shortfin mako shark.

## ORDER CARCHARHINIFORMES

## Family Proscylliidae

13. Eridacnis radcliffei Smith, 1913. Pygmy ribbontail catshark.

**Family Triakidae**

14. Mustelus mosis Hemprich & Ehrenberg, 1899. Arabian smooth-hound.

**Family Hemigaleidae**

15. Chaenogaleus macrostoma (Bleeker, 1852). Hooktooth shark.  
16. Hemigaleus microstoma Bleeker, 1852. Sicklefins weasel shark.  
17. Hemipristis elongatus (Klunzinger, 1871). Snaggletooth shark.

**Family Carcharhinidae**

18. Carcharhinus altimus (Springer, 1950). Bignose shark.  
19. C. amblyrhynchoides (Whitley, 1934). Graceful shark.  
20. C. amboinensis (Muller & Henle, 1839). Pigeye shark.  
21. C. brevipinna (Muller & Henle, 1839). Spinner shark.  
22. C. dussumieri (Valenciennes, 1839). Whitecheek shark.  
23. C. falciformis (Bibron, 1839). Silky shark.  
24. C. hemiodon (Valenciennes, 1839). Pondicherry shark.  
25. C. limbatus (Valenciennes, 1839). Blacktip shark.  
26. C. longimanus (Poey, 1861). Oceanic whitetip shark.  
27. C. macroti (Muller & Henle, 1839). Hardnose shark.  
28. C. melanopterus (Quoy & Gaimard, 1824). Blacktip reef shark.  
29. C. sealei (Pietschmann, 1916). Blackspot shark.  
30. C. sorrah (Valenciennes, 1839). Spot-tail shark.  
31. C. wheeleri Garrick, 1982. Blacktail reef shark.  
32. Galeocerdo cuvier (Peron & LeSueur, 1822). Tiger shark.  
33. Lamiopsis temmincki (Muller & Henle, 1839). Broadfin.  
34. Loxodon macrorhinus Muller & Henle, 1839. Sliteye shark.  
35. Negaprion acutidens (Ruppell, 1837). Sicklefins lemon shark.  
36. Prionace glauca (Linnaeus, 1758). Blue shark.  
37. Rhizoprionodon acutus (Ruppell, 1837). Milk shark.  
38. R. oligolinx Springer, 1964. Grey sharpnose shark.  
39. Scoliodon laticaudus Muller & Henle, 1838. Spadenose shark.  
40. Triaenodon obesus (Ruppell, 1837). Whitetip reef shark.

## Family Sphyrnidae

41. Eusphyra blochii (Cuvier, 1817). Winghead shark.
42. Sphyrna lewini (Griffith & Smith, 1834). Scalloped hammerhead.
43. S. mokarran (Ruppell, 1837). Great hammerhead.
44. S. zygaena (Linnaeus, 1758). Smooth hammerhead.

## Part B

1. Chiloscyllium punctatum Muller & Henle, 1838. Brown-banded bambooshark.
2. Eugomphodus tricuspidatus (Day, 1878). Indian sand tiger shark. (This species may be identical to No. 9).
3. Pseudocarcharias kamoharai (Matsubara, 1936). Crocodile shark.
4. Alopias pelagicus Nakamura, 1935. Pelagic tresher shark.
5. A. superciliosus (Lowe, 1839). Bigeye tresher shark.
6. Isurus paucus Guitart Manday, 1966. Longfin mako shark.
7. Mustelus manazo Bleeker, 1854. Starspotted smooth hound shark.
8. Carcharhinus albimarginatus (Ruppell, 1837). Silver tip shark.
9. C. amblyrhynchos (Bleeker, 1856). Grey reef shark (No. 30 may be identical to this species).
10. C. leucas (Valenciennes, 1839). Bull shark.
11. C. plumbeus (Nardo, 1827). Sandbar shark.

## ACKNOWLEDGEMENTS

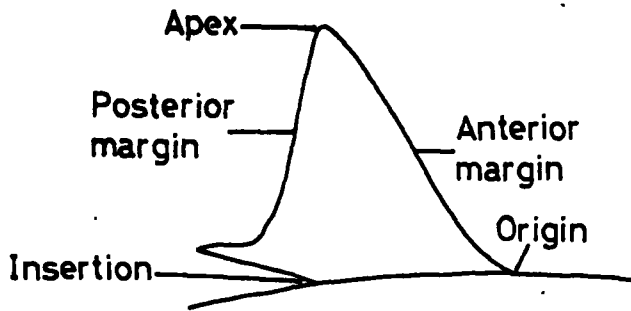
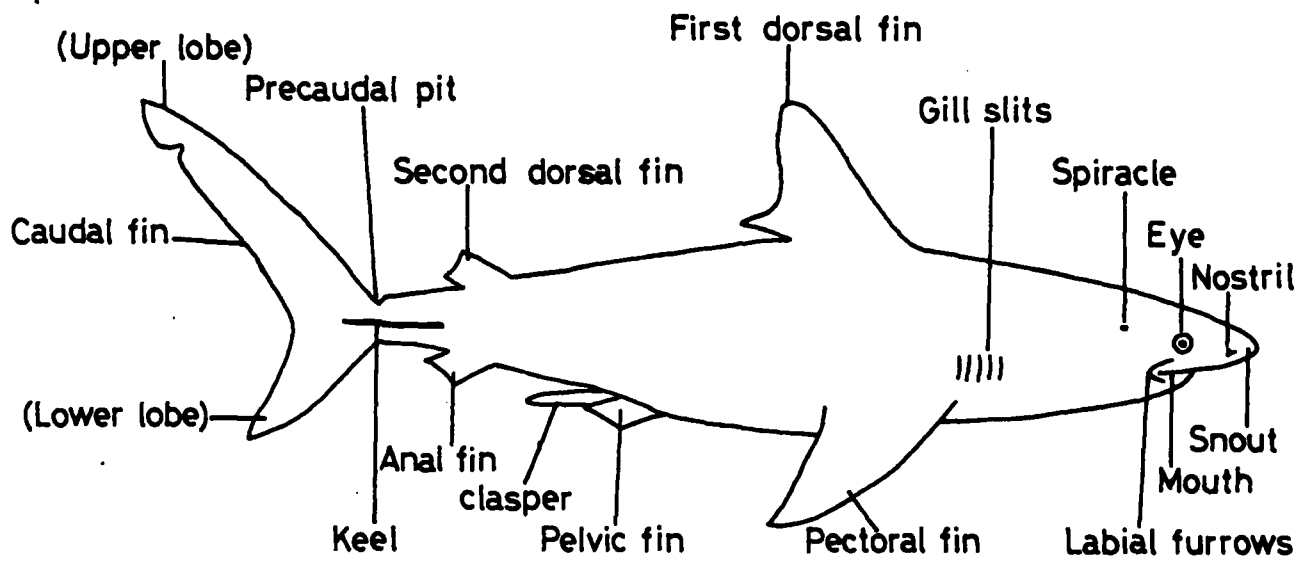
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## REFERENCES

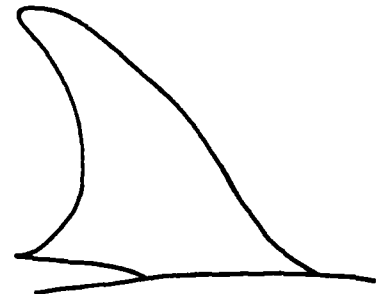
- Compagno, L.J.V. (1984). F.A.O. species catalogue. Sharks of the world. F.A.O. Fish. Synop., (125) Vol. 4 parts 1 and 2. Rome. F.A.O.
- De Silva, R.I. (1977). A guide to some sharks of Sri Lanka. *Loris* XIV (4): 225-232.
- De Silva, R.I. (1978). A short note on three new records of sharks from the coastal waters of Sri Lanka. *Loris* XIV (5): 316-317.
- De Silva, R.I. (1986). A natural history of the sharks of Sri Lanka. *Loris* XVII (4): 151-164.
- Munroe, I.S.R. (1955). The marine and freshwater fishes of Ceylon. Canberra. Dept. of External Affairs.
- Smith, J.L.B. (1961). The sea fishes of Southern Africa. 4th ed. Johannesburg. Central News Agency.

## LEGEND FOR FIGURE

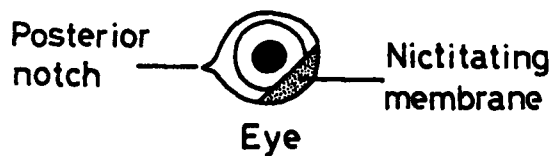
Figure 1 : Diagram of different regions of a shark explaining terms used in the Keys (mainly after Compagno).



Non-Falcate dorsal fin



Falcate dorsal fin



Intestinal Valves  
(Semi diagrammatic)



Scroll type (T.S)



Spiral type (L.S)