

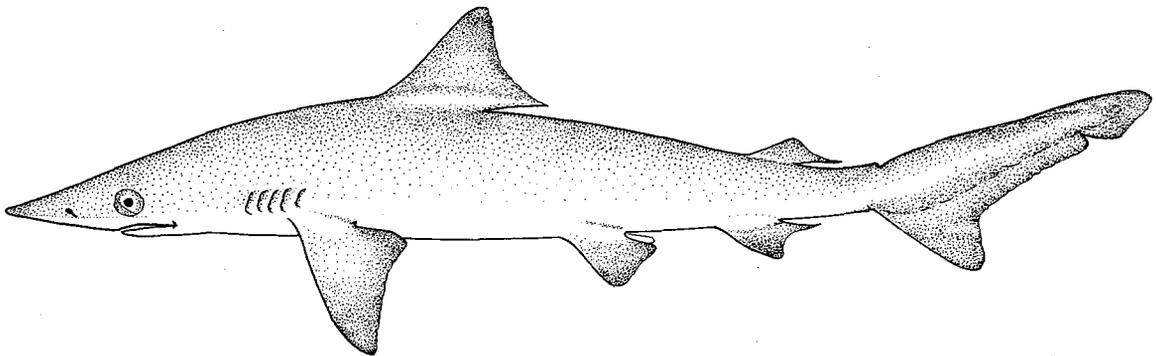
**Carcharhinus porosus** (Ranzani, 1839)

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*Carcharias porosus* Ranzani, 1839, *Acad.Sci.Inst.Bononiensis. Nov.Comm.*, 4:70, pl. 9, figs 1-3. Holotype: Male of 1170 mm, presumably adult, lost? Type Locality: Brazil.

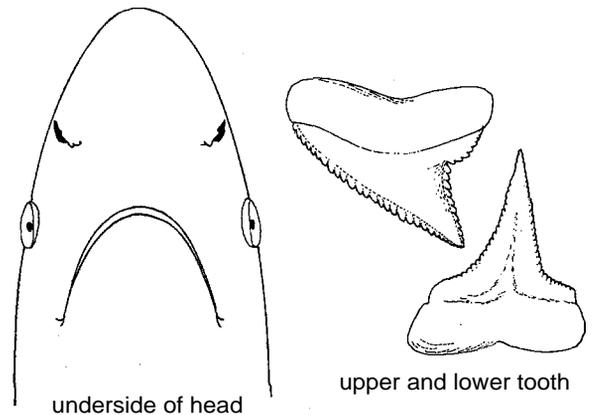
**Synonymy** : *Carcharias* (*Prionodon*) *henlei* Valenciennes, in Müller & Henle, 1839; *Carcharhinus cerdale* Gilbert, in Jordan & Evermann, 1898.

**FAO Names** : En - Smalltail shark; Fr - Requin tiqueue; Sp - Tiburón poroso.



**Field Marks** : A small grey shark with second dorsal small and with origin over anal midbase, anal base without long preanal ridges, labial furrows short, hyomandibular pores not conspicuous, snout long and pointed, small pectoral fins, anal fin deeply notched, 14 to 15 rows of anteroposterior teeth in each side of both jaws.

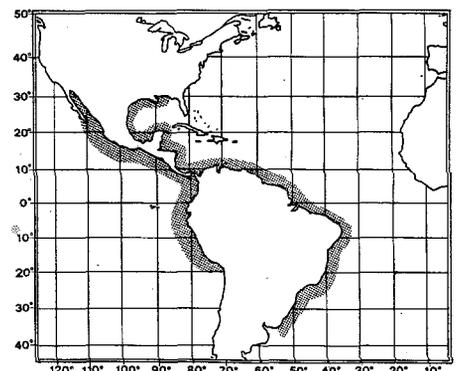
**Diagnostic Features** : A small slender species (less than 1.5 m). Snout moderately long and moderately pointed; internarial width 1.2 to 1.8 times in preoral length; eyes circular and large, their length 1.6 to 2.5% of total length; anterior nasal flaps expanded as slender, pointed lobes; upper labial furrows short and inconspicuous; hyomandibular line of pores just behind mouth corners not conspicuously enlarged; gill slits short, the third 2.8 to 3.4% of total length and a third or less of first dorsal base; usually 14 to 15/14 to 15 rows of anteroposterior teeth in each jaw half but varying from 13 to 15/13 to 15; upper teeth with narrow, strongly serrated, semierect to oblique, high cusps, and crown feet with slightly coarser serrations and postlateral cusplets; lower teeth with semierect or oblique, narrow serrated cusps and transverse roots. No interdorsal ridge. First dorsal fin large and falcate, with bluntly pointed apex and posterior margin curving ventrolaterally from fin apex; origin of first dorsal fin usually over the pectoral inner margins but sometimes slightly posterior to pectoral insertion; inner margin of first dorsal moderately long, half of dorsal base or slightly less; second dorsal fin moderate-sized and fairly low, its height 2.2 to 2.8% of total length, its inner margin moderately long and 1.4 to 1.9 times its height; origin of second dorsal over or slightly behind anal midbase; pectoral fins small, falcate, with narrowly rounded or pointed apices, length of anterior margins about 13 to 16% of total length; 96 to 135 total vertebral centra, 41 to 61 precaudal centra. Colour grey above, light below, tips of pectoral, dorsal and caudal fins frequently dusky or blackish, but not conspicuously marked; white flank band inconspicuous.



**Geographical Distribution** : Western Atlantic: Northern Gulf of Mexico coastally to southern Brazil, not in Caribbean Islands. Eastern Pacific: Gulf of California to Peru, not at offshore islands.

**Habitat and Biology** : A common inshore tropical shark of the American continental shelves, found near the bottom at depths from close inshore down to at least 36 m; favours mud bottom and especially estuaries.

Viviparous, with a yolk sac placenta; number of young 2 to 7. In Brazilian waters born in late spring or summer, with a gestation period of 10 months or more. About 52% of young are males.



A harmless shark, primarily a fish-eater, that eats sardines, sea catfish, croakers, jacks, grunts, other small sharks including young hammerheads and sharpnose sharks, and shrimp.

**Size** : Probably not exceeding 150 cm; males maturing between 75 and 78 cm and reaching 117 cm; females mature at 84 cm or below and reaching 134 cm; size at birth between 31 and 40 cm.

**Interest to Fisheries** : Caught incidentally throughout its range, with longlines, and utilized fresh, fresh frozen and dried salted for human consumption; the liver is also extracted for oil (vitamins) and carcasses are used for fishmeal.

**Literature** : Bigelow & Schroeder (1948); Sadowsky (1967); Kato, Springer & Wagner (1967); Garrick (1982).

**Remarks** : Garrick (1982) noted that this species also occurs in the western Pacific, off Viet Nam (Ho Chi Minh City), Borneo (Baram) and Thailand (Bangkok).

Examination of a Borneo specimen referred by Garrick to porosus and Garrick's published data on the Vietnamese and Thai specimens of porosus strongly suggests that these specimens are not conspecific with C. porosus, but represent a C. borneensis-like species that is apparently not referable to C. borneensis either. These specimens may represent an undescribed small species of Carcharhinus.

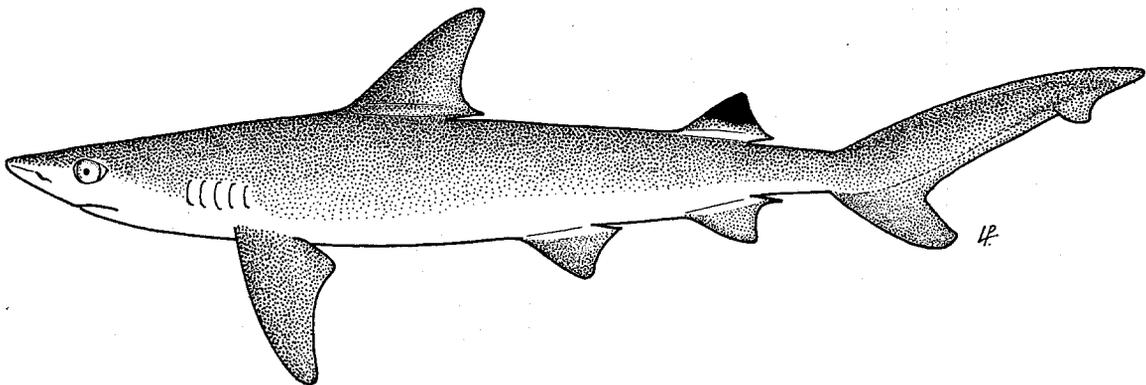
**Carcharhinus sealei** (Pietschmann, 1916)

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Carcharias sealei Pietschmann, 1916, Jahrb.Nassau. Ver.Nat., 172, ftn pl. 1. Replacement name for Carcharias borneensis Seale, 1910, Philipp.J.Sci., ser. D, 5:263, fig. 1-4. Holotype: (Carcharias borneensis Seale, 1910), Bureau of Science, Manila, the Philippines, 2720 (apparently lost; Garrick, 1982). Type Locality: Sandakan, Borneo.

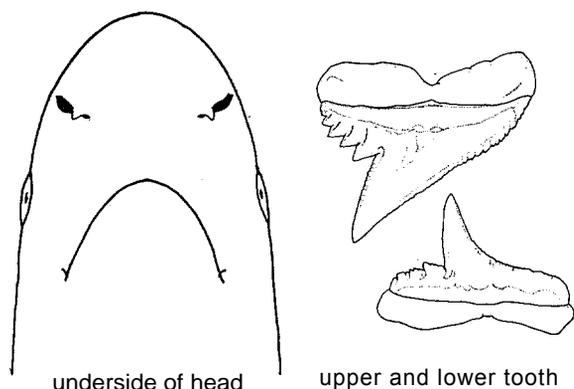
**Synonymy**: Carcharias borneensis Seale, 1910 (not Carcharias (Prionodon) borneensis Bleeker, 1859 = Carcharhinus borneensis); Platypodon coatesi Whitley, 1939.

**FAO Names** : En - Blackspot shark; Fr - Requin à taches noires; Sp - Tiburón alinegro.



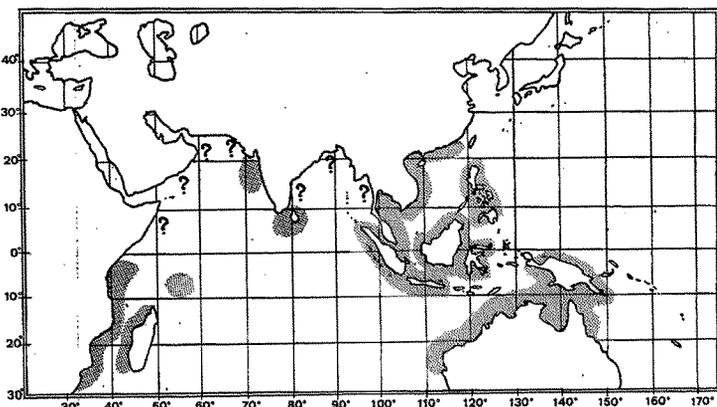
**Field Marks** : A small grey shark with a moderately long rounded snout, fairly large horizontally oval eyes, a black spot on the second dorsal fin but no other markings, oblique-cusped serrated teeth in both jaws, upper teeth with strong, smooth-edged cusplets, usually 12/12 rows of anterolateral teeth, small falcate pectoral fins, a small falcate first dorsal with a short rear tip and a moderately large second dorsal with a short rear tip.

**Diagnostic Features :** A usually slender species (up to about 95 m). Snout short and moderately pointed to rounded; internarial width 1.2 to 1.6 times in preoral length; eyes usually horizontally oval and moderately large, their length 2 to 2.8% of total length; anterior nasal flaps moderately elongate and broadly triangular; upper labial furrows short and inconspicuous; hyomandibular line of pores just behind mouth corners not conspicuously enlarged; usually 12/12 rows of anterolateral teeth in each jaw half but varying from 12 to 13/11 to 13; upper teeth with narrow to moderately broad, strongly serrated, strongly oblique, cusps, and distal crown feet with strong, usually smooth-edged cusplets; lower teeth with oblique, serrated or smooth cusps. Interdorsal ridge present or absent. First dorsal fin small, falcate, with a pointed or narrowly rounded apex and posterior margin dropping ventrally or anteroventrally from apex; its origin usually over or slightly posterior to pectoral free rear tip; its inner margin short, about half of first dorsal base; second dorsal fin large and high, its height 2.8 to 4.3% of total length, its inner margin short and 0.8 to 1.3 times its height; origin of second dorsal slightly to noticeably behind anal fin origin; pectoral fins small, strongly falcate, and with narrow, pointed apices, length of anterior margins about 15 to 17% of total length in larger individuals (60 cm and above); 148 to 167 total vertebral centra, 74 to 85 precaudal centra. Colour grey or tan above, lighter below; a conspicuous black or dusky tip present on second dorsal fin, but other fins with pale posterior edges and no dark markings; inconspicuous light stripes on flanks.



**Geographical Distribution :** Indo-West Pacific: South Africa, Madagascar, Mozambique, Tanzania, Kenya, Seychelles, Mauritius, Pakistan, Sri Lanka, India, Andaman Islands, Thailand, Viet Nam, China, Sumatra, Java, Sulawesi, New Guinea, Australia (western and northern Australia, Queensland).

**Habitat and Biology :** A common coastal shark on the continental and insular shelves, from the surf line and intertidal region to 40 m depth, usually in shallow water. It is not found off river mouths and may be intolerant of reduced salinities. One was caught at the surface in water 1260 m deep west of Madagascar, but close to shallow water. Off Natal, South Africa this shark appears to be resident all year, with some increase in numbers during the summer.



Viviparous, with a yolk sac placenta; number of young 1 or 2 per litter. Off South Africa, young are born in spring, and the gestation period is thought to be about 9 months. Van der Elst (1981) gave a growth curve indicating that this is rather fast-growing for a shark, maturing at about a year old and reaching a maximum age of at least 5 years.

This shark eats small fishes, including sea horses, as well as squid and prawns. A small, harmless species, not known to be dangerous to people.

**Size :** Maximum 95 cm, males maturing at 70 to 80 cm, and reaching 95 cm, females maturing at 68 to 75 cm and reaching at least 94 cm.

**Interest to Fisheries :** A common inshore shark where it occurs, readily available and commonly caught by artisanal and smallscale commercial fisheries as well as sport anglers fishing from the shore. Commonly fished with line gear and gillnets off India, Pakistan, Sri Lanka and Thailand, and utilized for human consumption.

**Literature :** Whitley (1940); Garrick (1967, 1982); Bass, D'Aubrey & Kistnasamy (1973); Van der Elst (1981).

**Remarks :** The present species has often been confused with *C. dussumieri*, and has often been listed under its name or its synonym *C. tjuatjot*, or *C. menisorrah*.

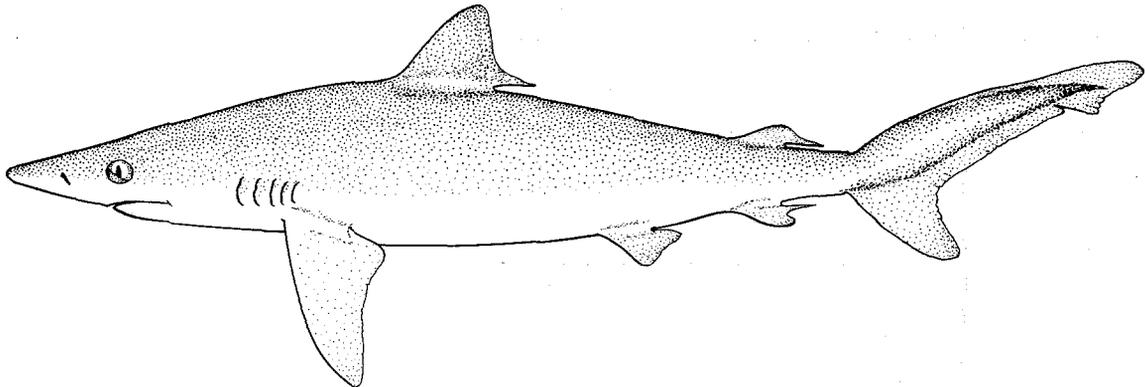
**Carcharhinus signatus** (Poey, 1868)

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Hypoprion signatus Poey, 1868, Repert.fisico-nat.Isla Cuba, 2:452, pl. 4, fig. 7-8. Holotype: ?. Type Locality: Cuba.

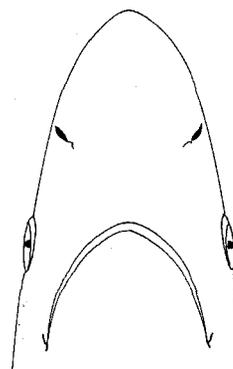
**Synonymy** : Hypoprion longirostris Poey, 1876; Hypoprion bigelowi Cadenat, 1956.

**FAO Names**: En - Night shark; Fr - Requin de nuit; Sp - Tiburón nocturno.

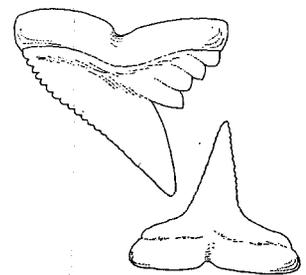


**Field Marks**: A large grey shark with a long pointed snout, large eyes, oblique-cusped upper antero-lateral teeth with smooth or weakly serrated cusps and strong cusplets, lower teeth with erect to semierect cusps but no cusplets, usually 15/15 rows of anterolateral teeth, an interdorsal ridge, moderate-sized pectoral fins, a small first dorsal with a moderately long rear tip and a low second dorsal with a long rear tip, and no conspicuous markings on fins.

**Diagnostic Features** : A fairly slender species (up to about 2.8 m). Snout very long and moderately pointed; internarial width 1.7 to 1.9 times in preoral length; eyes circular and moderately large, their length 1.8 to 2.7% of total length; upper labial furrows short and inconspicuous; hyomandibular line of pores just behind mouth corners not conspicuously enlarged; gill slits short, the third 2.5% of total length and less than a third of first dorsal base; usually 15/15 rows of anteroposterior teeth in each jaw half; upper teeth with narrow, smooth or irregularly serrated, oblique cusps, and crown feet with strong distal cusplets (young) or coarse proximal and distal serrations or weak cusplets (adults); lower teeth with erect, smooth cusps and transverse roots. Interdorsal ridge present. First dorsal fin small and triangular, with a pointed or narrowly rounded apex and posterior margin curving posteroventrally from fin apex; origin of first dorsal fin over pectoral free rear tips; inner margin of first dorsal moderately long, half of dorsal base or slightly less; second dorsal fin small and low, its height 1.7 to 2.1% of total length, its inner margin long and about 1.9 to 2.2 times its height; origin of second dorsal over or slightly posterior to anal origin; pectoral fins moderate-sized, slightly falcate, with narrowly to fairly broadly rounded apices; length of anterior margins about 17 to 18% of total length in individuals of all sizes; 184 to 192 total vertebral centra, 101 to 104 precaudal centra. Fins without conspicuous markings, sometimes small black spots scattered on body. An inconspicuous white band on flank.



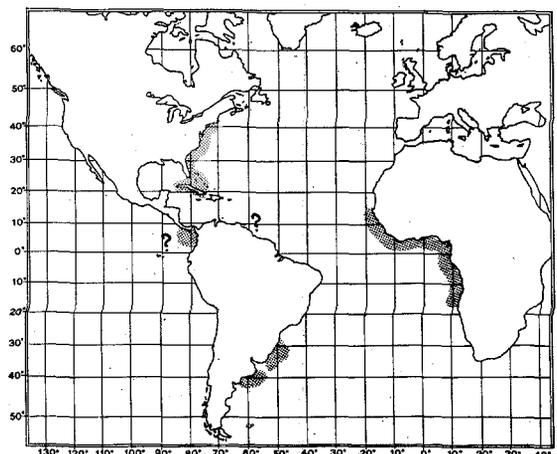
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upper and lower tooth

**Geographical Distribution** : Western Atlantic: Delaware to Florida, Bahamas, Cuba, ? Guayana; southern Brazil, Argentina. Eastern Atlantic: Senegal to Ivory Coast, Ghana to Cameroon, Zaire, Angola. ? Eastern Pacific: Panama.

**Habitat and Biology** : A common deepwater coastal and semioceanic carcharhinid, occurring on or along the outer continental and insular shelves of the tropical and warm-temperate Atlantic. Prefers waters 50 to 100 m deep, but with considerable numbers reaching the surface and extending down to 200 m, and some occurring down to at least 600 m. The night shark is apparently a schooling species, uncommonly caught singly but often in groups; and caught at night or dawn rather than the day which indicates



that it makes vertical migrations. Shows a seasonal variation in numbers off Cuba apparently as a result of geographic migrations. Recorded temperatures where it was caught off West Africa at depth of 90 to 285 m, 11° to 16° C; salinity 36‰; oxygen 1.81 ml/l (Poll, 1950).

Viviparous, with a yolk-sac placenta; number of young 4 to 12 per litter.

The night shark feeds mainly on small active bony fishes, including flyingfish, scombrids, butterfishes, sea basses and squid. It is apparently a relatively quick, active shark, but is not known to be dangerous to people.

**Size** : Maximum 280 cm, adult females recorded at 178 to 179 cm, size at birth about 60 cm.

A length-weight curve for sharks caught off Cuba is:

$$WT = 0.2998 \times 10^{-6} TL^{3.738} \text{ (Guitart Manday, 1975).}$$

**Interest to Fisheries** : This species is primarily fished off Cuba but is also caught in the eastern Atlantic, with longlines but occasionally also pelagic trawls, and utilized for fishmeal and oil.

**Literature** : Bigelow & Schroeder (1948); Poll (1950); Cadenat (1956); Guitart Manday (1975); Applegate *et al.* (1979) Cadenat & Blache (1981); Raschi, Musick & Compagno (1982).

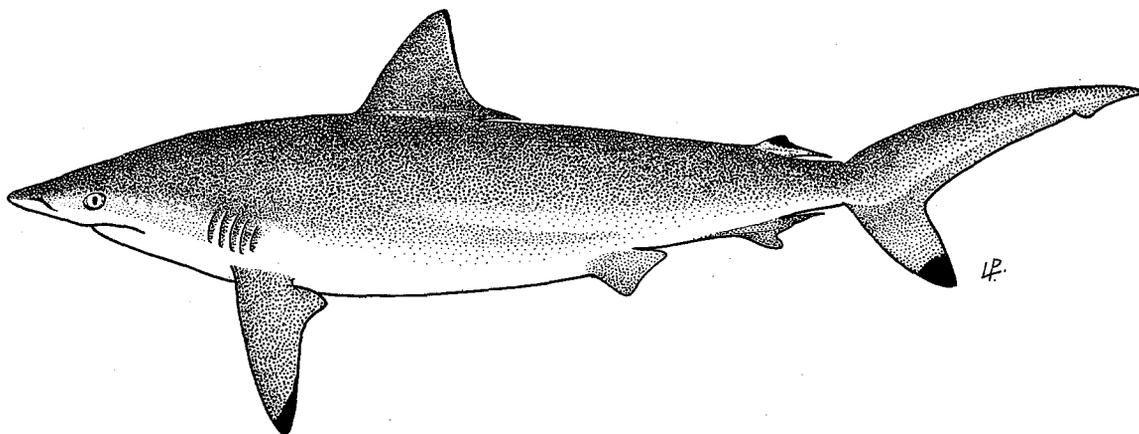
**Carcharhinus sorrah** (Valenciennes, 1839)

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*Carcharias* (*Prionodon*) *sorrah* Valenciennes, in Müller & Henle, 1839, *Syst.Beschr.Plagiost.*, (2):45, pl. 16. Lectotype: Rijksmuseum van Natuurlijke Historie, Leiden, RHN 4294, 570 m female, Java, designated by Garrick (1982). Type Locality: "Indien, Java, Madagaskar".

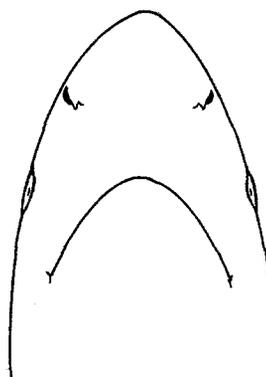
**Synonymy** : *Squalus spallanzani* Peron & LeSueur, in LeSueur, 1822 (see discussion below); *Carcharias* (*Prionodon*) *bleekeri* Dumeril, 1865; *Carcharias taeniatus* Hemprich & Ehrenberg, 1899; *Galeolamna isobel* Whitley, 1947.

**FAO Names**: En - Spot-tail shark; Fr - Requin a queue tachetée; Sp - Tiburón rabo manchado.

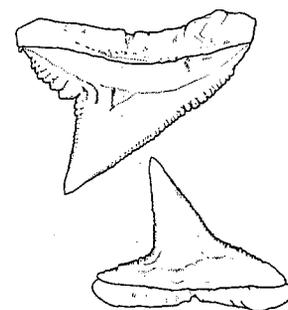


**Field Marks** : A small to fairly large, spindle-shaped grey shark with moderately long rounded snout, fairly large eyes, oblique-cusped serrated teeth in both jaws, upper teeth with strong cusplets, usually 12/12 rows of anterolateral teeth, an interdorsal ridge, small pectoral fins, a moderate-sized first dorsal with a short rear tip and a small, low second dorsal with a long rear tip, and conspicuous large black tips on the ventral caudal lobe, second dorsal and pectoral fins.

**Diagnostic Features** : A small to moderately large, fairly stocky and spindle-shaped species (up to about 1.6 m). Snout moderately long and pointed; internarial width 1.3 to 1.5 times in preoral length; eyes circular and moderately large, their length 1.7 to 2.4% of total length; anterior nasal flaps narrow, elongated and nipple-shaped;



underside of head

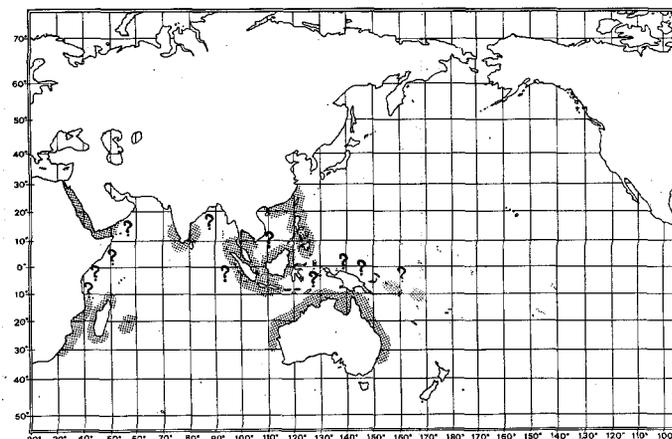


upper and lower tooth

upper labial furrows short and inconspicuous; hyomandibular line of pores just behind mouth corners not conspicuously enlarged; gill slits fairly short, the third 2.1 to 3.3% of total length and slightly less than a third of first dorsal base; usually 12/12 rows of anteroposterior teeth in each jaw half but varying from 11 to 13/11 to 12; upper teeth with narrow, strongly serrated, oblique moderately high cusps, and crown feet with coarse proximal serrations and strong distal cusplets; lower teeth with oblique narrow serrated cusps and transverse roots, but no cusplets. A low interdorsal ridge present. First dorsal fin large and falcate, with a pointed or narrowly rounded apex and posterior margin curving ventrally from fin apex; origin of first dorsal fin varying from slightly behind to slightly in front of the pectoral free rear tips; inner margin of first dorsal moderately long, slightly less than half the dorsal base; second dorsal fin small and low, its height 1.5 to 2.2% of total length, its inner margin long and 2 to 2.6 times height; origin of second dorsal 1/3 of anal base behind anal origin; pectoral fins fairly small, falcate, with narrowly rounded or pointed apices, length of anterior margins about 16 to 18% of total length; 153 to 175 total vertebral centra, 66 to 79 precaudal centra. Body medium grey above white below; a conspicuous and large black tip on the pectorals, second dorsal, and ventral caudal lobe, but first dorsal only with black edge at most; a conspicuous white band on flank.

**Geographical Distribution :** Indo-West Pacific: Mozambique and South Africa, Madagascar, Mauritius, Seychelles, Red Sea, Aden, southern Yemen, Pakistan, India, Sri Lanka, Singapore, Java, ? Sumatra, ? Malaysia, Thailand, Viet Nam, China (including Taiwan Island), The Philippines, Australia (New South Wales, Queensland, western and northern Australia), Vanikoro Island (Santa Cruz Islands), Solomon Islands.

**Habitat and Biology :** A common coastal, shallow-water tropical shark of the continental and insular shelves, primarily around coral reefs at depths from the intertidal down to 73 m.



Differences in vertebral counts and litter sizes between spot-tail sharks in the Red Sea and southwestern Indian Ocean may indicate relatively isolated populations there, but this needs confirmation.

Viviparous, with a yolk-sac placenta; number of young 3 to 6 per litter, commonly 6 Off Bombay, the birth season is in spring (March to May); and possibly in summer off Madagascar. Young spot-tail sharks occur in quiet, shallow water, apart from the adults.

Eats bony fishes, including bonito and sea bass, and octopi.

**Size :** Maximum about 160 cm, recorded at 198 and 230 cm but possibly incorrectly; males maturing at 106 cm or below and reaching at least 128 cm, females maturing between 110 and 118 cm and reaching at least 150 cm; size at birth 45 to 60 cm.

**Interest to Fisheries :** A common, wide-ranging inshore shark that apparently is regularly caught by local artisanal and smallscale commercial fisheries where it occurs, including off Pakistan, Sri Lanka, India and Thailand; taken with line gear and gillnets and utilized for human consumption; probably also used for fins and liver oil.

**Literature :** Fowler (1941); Setna & Sarangdhar (1949); Garrick & Schultz (1963); Garrick (1967, 1982); Bass, D'Aubrey & Kistnasamy (1973).

**Remarks :** Garrick (1982) noted that the earliest species name for this shark was *Squalus spallanzani* Peron & LeSueur in LeSueur, 1822. The original description of *S. spallanzani* is sketchy and inadequate to establish its identity, but an unpublished and accurate drawing by LeSueur clearly does so. However, Garrick chose to retain the far better known name *C. sorrah* for the present species, as there is no type material for *S. spallanzani*, the usage of its name has been generally incorrect, and because of the inadequacy of its original description.

**Carcharhinus wheeleri** Garrick, 1982

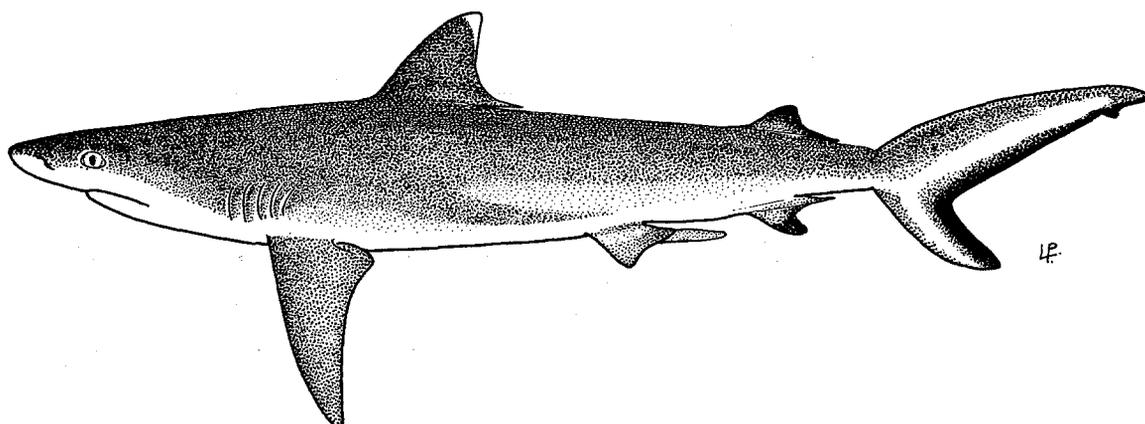
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*Carcharhinus wheeleri* Garrick, 1982, U.S.Dept.Commerce, Nat.Mar.Fish.Serv.Circ., (445):111, figs 50-51. Holotype: U.S. National Museum of Natural History, USNM 197418, 1322 mm adult male. Type Locality: Red Sea.

**Synonymy:** None.

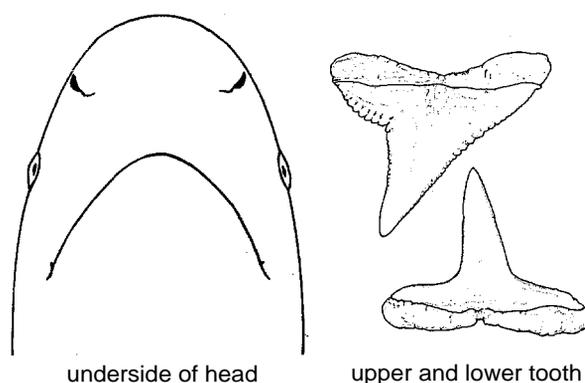
**Other Scientific Names Recently in Use :** *Carcharhinus spallanzani* (Peron & LeSueur, in LeSueur, 1822), see discussion under *Carcharhinus sorrah*; *Carcharhinus amblyrhynchus* Bleaker, 1856).

**FAO Names :** En - Blacktail reef shark; Fr - Requin à queue noire; Sp - Tiburón coralero rabinegro.



**Field Marks:** A medium-sized grey shark with a moderately long, broadly rounded snout, usually round eyes, no interdorsal ridge, narrow-cusped, serrated upper anteroposterior teeth, usually 13/13 on each side, white-tipped first dorsal fin, large second dorsal fin with a short rear tip, and a broad black band on the posterior margin of the caudal fin.

**Diagnostic Features:** A fairly stocky species (to 1.7 m). Snout fairly long and broadly bluntly rounded; internarial width 1 to 1.4 times in preoral length; eyes usually round and fairly large, their length 2 to 2.9% of total length; anterior nasal flaps hardly expanded as very low triangular lobes; upper labial furrows short and inconspicuous; hyomandibular line of pores just behind mouth corners not conspicuously enlarged; gill slits moderate-sized, the third 2.5 to 3.1% of total length and less than 2/5 of first dorsal base; usually 13/13 rows of anteroposterior teeth in each jaw half but varying from 13 to 14/14 to 15; upper teeth with narrow, strongly serrated, semierect to oblique, high cusps, and crown feet with coarser serrations and often distal cusplets; lower teeth with erect or semioblique, narrow serrated cusps and transverse roots. Usually no interdorsal ridge. First dorsal fin moderate-sized and semifalcate, with a narrowly rounded or pointed apex and posterior margin curving ventrally from fin apex; origin of first dorsal fin usually over or just in front of pectoral free rear tips; inner margin of first dorsal moderately long, somewhat or less than half dorsal base; second dorsal fin moderately large and high, its height 2.8 to 4.1% of total length, inner margin fairly long and 1 to 1.5 times its height; origin of second dorsal over or slightly in front of anal origin; pectoral fins moderately large, narrow and falcate, with narrowly rounded or pointed apices, length of anterior margins about 18 to 21% of total length; 210 to 227 total vertebral centra, 110 to 117 precaudal centra. Colour grey above, white below; first dorsal with a white tip and posterior margin, entire posterior margin of caudal (terminal, pre-and postventral margins) with a conspicuous broad black band, pectorals, second dorsal, anal, and pelvic fins with blackish or dusky tips.



**Geographical Distribution :** Apparently confined to the western Indian Ocean, off South Africa, Madagascar, Mozambique, Tanzania, the Seychelles, Comores, and Aldabra Islands, St. Brandon Reef, Kenya, the Gulf of Aden, and the Red Sea.

**Habitat and Biology :** A common coastal, inshore to offshore reef shark where it occurs, from the surface and intertidal down to at least 140 m. It is common on deeper banks away from major reefs and along fringing reefs, but is occasionally found on reef flats. Younger sharks apparently live in shallower waters than adults.

Viviparous, with a yolk-sac placenta; number of young 1 to 4 per litter, with larger females having larger litters. Mating and conception, as well as birth, occurs in the winter and early spring with a gestation period of about a year.

Eats small fishes, squid and octopi. Not implicated in attacks on people, but aggressive when spearfishing activities are occurring and hence potentially dangerous.

