

Rhizoprionodon porosus (Caribbean Sharpnose Shark)

Family: Carcharhinidae (Requiem Sharks)

Order: Carcharhiniformes (Ground Sharks)

Class: Chondrichthyes (Cartilaginous Fish)



Fig. 1. Caribbean sharpnose shark, *Rhizoprionodon porosus*.

[http://www.discover-tt.net/marinas/marine_wildlife_tobagos_shores/r.html, downloaded 29 March 2015]

TRAITS. *Rhizoprionodon porosus* is commonly known as the Caribbean sharpnose shark and belongs to the family of Carcharhinidae or requiem sharks. This family often possess five gill slits over or posterior to the pectoral fin, and two dorsal fins. *R. porosus* possesses a slender body, elongated, moderately rounded snout and has long labial furrows at its mouth corners (Figs 1 and 2). Its prenarial snout (in front of the nostrils) is approximately 3.3 to 4.5% of its total length (Compagno, 1984). *R. porosus* has a brown to grey-brown body colour and a white underside with occasional white spots along the flank region. The shark's interdorsal ridge is also poorly developed or completely absent (NOAA, 2001). The upper labial furrows are well developed, short and approximately between 1.3 to 2.3 percent of its body's length. Smooth or weakly serrated teeth are observed in adults and teeth are notably triangular in shape with even edged cusps (Fig. 3). The shark's upper teeth are finely serrated and have oblique edges (Compagno, 1984). The species has been recorded as achieving a maximum total length of 110cm. Males mature at about 60cm and reach at least 85cm whereas females mature at about 80cm and may reach 108cm (Compagno, 1984). Vertebrae growth analyses determined that females tend to grow older and larger than males, however males have a faster growth rate which accounted for significant differences between the sexes (IUCN, 2015). The annual growth rate of *R. porosus* was found to be approximately 7.3 cm/year beginning at an age of three, however, growth within the juvenile stage is approximately 11.2cm/year (Lessa et al., 2009).

DISTRIBUTION. *Rhizoprionodon porosus* is mostly found in the Western, Central and Southwest Atlantic ranging between Honduras in Central America, within the Caribbean (including Trinidad and Tobago) and at lower latitudes such as Uruguay in South America (IUCN, 2015) (Fig. 4). It is native to many countries inclusive of Bahamas, Haiti, Martinique, Brazil, and Uruguay (Compagno et al., 2005). Migration of this particular species is not known and requires further research. Some ecosystems where this species occur and is native to include the Atlantic Ocean, North and East Brazil shelf and the Caribbean sea (Fishbase.org, 2015).

HABITAT AND ACTIVITY. The Caribbean sharpnose shark is in most abundance in sandy, shallow grounds mostly within littoral marine environments as well as close inshore within the Caribbean and South America as well as offshore in waters at a depth of 500m. This requiem shark lives in a range of environments such as reef-associated, freshwater, brackish and marine and is more nocturnal (IUCN, 2015). There are some exceptions that have been found in deeper regions. Sexual maturity is achieved at 65cm TL in females and 65-70cm TL in males, these corresponded to a two-year old individual in the study conducted.

FOOD AND FEEDING. Mostly feeds opportunistically on bony fishes small in size, for instance, wrasses, along with marine organisms such as shrimp, squid and snails. This species diet is made up of mostly bony fish along with crustaceans (IUCN, 2015).

POPULATION ECOLOGY. According to Lessa et al. (2009), *R. porosus* within the coast of northeastern Brazil, Pernambuco, achieved a pinnacle age of 10 years that corresponded with an individual of length 100.5 cm (Montealegre-Quijano, 2002). The maximum reported age was 8 years for females and 5 years for males (Mattos et al., 2002). Sharpnose sharks are known to form large schools of same sex and size but some are also solitary (Compagno et al., 2005). This species has been identified within the stomachs of larger sharks in sampled waters of Northern, Southeastern and southern Brazil. Thus, this suggests that this species is of possible importance to the nourishment of larger sharks.

REPRODUCTION. In females, reproduction occurs annually and copulation occurs immediately after parturition (giving birth). Most adult females are prepared for copulation at various times during the year, there is, however, an optimal period noted amid late winter into early summer. Small litters may be comprised of 2-6 pups that measure 31-39cm at birth. Fecundity is approximately 1-8 embryos increasing with maternal size. This viviparous (live-bearing) organism, with a yolk-sac placenta, has a gestation period of about 10-11 months and bears during spring time or early summer (Compagno et al., 2005). Thus, this individual produces live young from within the body as opposed to eggs. The sex ratio is also biased towards females (Mattos et al., 2001).

BEHAVIOUR. Requiem sharks possess sophisticated senses of vibration and electro-conductivity. Specific behaviour about the Caribbean sharpnose shark is not known and more definite research is required.

APPLIED ECOLOGY: This species is a common component in the catch either directly or incidentally fisheries in both bycatch of commercial and artisanal purposes. This may affect the equilibrium of the population. Therefore, the need for selective fishing gear and protected areas is needed for the reduction of fisheries and sustainable populations. *R. porosus* is one of the most common inshore sharks mainly trapped with buoyant, moving longlines as well as bottom trawls and trammel nets. This species is used for human consumption and processed into fishmeal

(Compagno et al., 2005). No specific conservation measures are in effect and *R. porosus* is categorized as an organism of Least Concern by the IUCN (International Union for Conservation of Nature) since it is considered an abundant and common species. This is as a result of the widespread distribution, relatively fast growth rate and small size (IUCN, 2015).

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Author: Karen Seudat Singh

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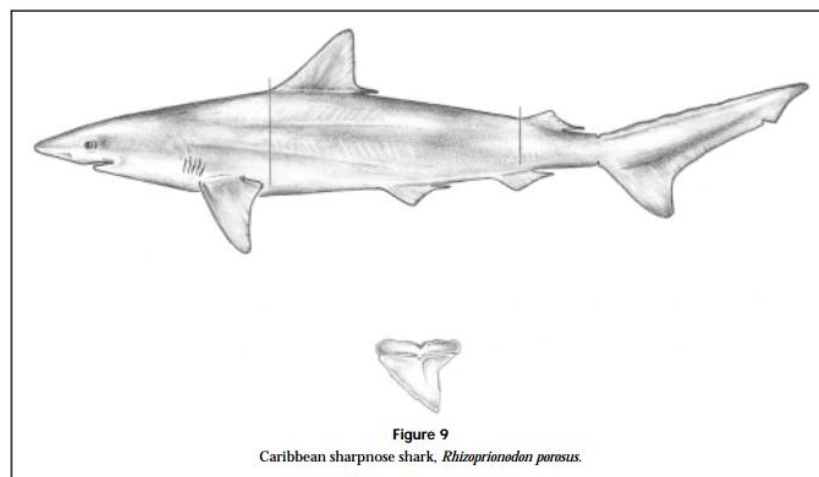


Fig. 2. Features of the Caribbean sharpnose shark, *Rhizoprionodon porosus*

[<http://www.flmnh.ufl.edu/fish/Gallery/Descript/CSharpnose/CSharpnose.html>, downloaded 29 March 2015]

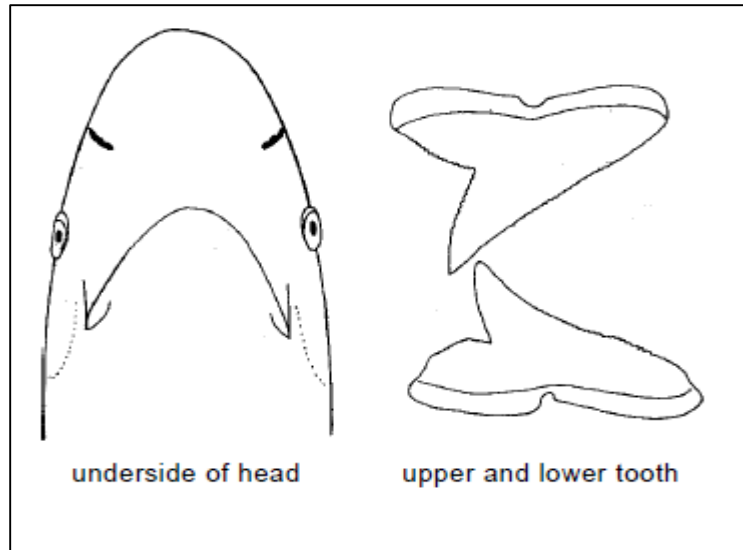


Fig. 3. Ventral view of Caribbean sharpnose head, and teeth.

[FAO Species Catalog, Volume 4 Part 2 Sharks of the world]



Fig. 4. Map of distribution of Caribbean sharpnose shark, *Rhizoprionodon porosus*.

[<http://maps.iucnredlist.org/map.html?id=61407>, downloaded 31 March 2015]