

Carcharhinus perezii (Caribbean Reef Shark)

Family: Carcharhinidae (Requiem Sharks)

Order: Carcharhiniformes (Ground Sharks)

Class: Chondrichthyes (Cartilaginous fish)



Fig. 1. Caribbean reef shark, *Carcharhinus perezii*.

[<http://www.sharksider.com/caribbean-reef-shark/>, downloaded 27 February 2015]

TRAITS. Caribbean reef sharks are reef dwelling sharks that are grey to light grey above and white to light yellow below. These reef sharks reach a maximum length of 2.95m and the underside of their anal, pelvic and pectoral fins as well as the ventral caudal lobe have a dusky colour. Reef sharks are ridgeback sharks, and have an interdorsal fin present between the first and second dorsal fins. The snout of the Caribbean reef shark is moderately short and broadly rounded with relatively large eyes. Reef sharks have acute senses, including of electric fields using the ampullae of Lorenzini, which are small pores in the skin that form a sensory network. A lateral canal system also allows for the detection of water vibrations.

DISTRIBUTION. Found in the tropical waters of the Americas as well as the Caribbean. These sharks are predominantly abundant in the Caribbean which is how they are given their name. They can also be found off the coast from Florida to Brazil (Fig. 2).

HABITAT AND ACTIVITY. Caribbean reef sharks can be found in coral reef habitats at the bottom of the ocean near insular as well as continental shelves. These sharks prefer to inhabit shallow waters that have a maximum depth of 30m. Caribbean reef sharks populate the outer edges of coral reefs near drop offs. These sharks have the unique habit of “sleeping” on the

ocean floor or within reef caves (Fig. 3). This gives them the nickname sleeping sharks. Recent studies have shown that the movement of Caribbean reef sharks is more extensive than previously thought. With the use of acoustic telemetry researchers found that a reef shark was able to travel 30km over deep (400m) waters. They usually remain within areas of 4 km², travelling mainly during the night (Rosa et al., 2006).

FOOD AND FEEDING. Caribbean reef sharks obtain their food from the coral reef itself. Their diet includes bony fish, large crustaceans and cephalopods. Yellow stingrays and eagle rays are also consumed by Caribbean reef sharks. This type of shark has the unique ability to revert or purge their stomach, a mechanism used to remove parasites, mucus or any other objects in the stomach lining.

REPRODUCTION. Adult reef sharks begin the reproductive process when females grow to a size of 2-3m or males grow to a size of 1.5-1.7m. Caribbean reef sharks reproduce with a biennial reproductive cycle where gestation occurs for approximately one year, producing three to six shark pups. This behaviour is indicative of low reproductive productivity. Size at birth is about 60-75cm. The reproduction method used by reef sharks is viviparous, where the shark pups develop inside of the mother. During mating season female Caribbean reef sharks are found with deep wound on their sides, indicating aggressive treatment by male sharks during reproduction. Female Caribbean reef sharks migrate to nursery waters before it is time for them to give birth. This body of water lies to the northwest of the Brazilian coast. The birth of reef sharks most commonly occurs between February and April or November to December.

BEHAVIOUR. The younger reef sharks inhabit shallow waters until they grow bigger because larger shark species such as the bull or tiger sharks tend to prey on juvenile Caribbean reef sharks. Sharks are territorial animals. This type of shark is relatively passive and typically poses no threat to scuba divers, snorkelers, swimmers, or other humans (Fig. 4). Caribbean reef sharks are mostly loners but may be aggressive around food. When these sharks are threatened, they put on an impressive threat display. This “threat dance” includes the dipping of pectoral fins at intervals of 1-2 seconds accompanied by swimming in a zig-zag motion. This agonistic behaviour is dependent upon feeding technique. The Caribbean reef shark is seen as the most subtle in a continuum of agonistic behaviours in sharks, while the silver tip, Galapagos and grey reef sharks are viewed as more overt. However, more systematic observation on Caribbean reef sharks is needed to definitively identify agonistic behaviour in this shark species (Martin 2006).

APPLIED ECOLOGY. The IUCN red list of threatened species lists *C. perezii* as a near threatened species (Rosa et al., 2014). As a result several conservation techniques have been put in place. Remote sensing is a technique that has been used to map the structure and habitat composition of coral reefs in efforts to conserve these fragile ecosystems (Mumby et al., 2004). Another method being used to conserve coral reef habitats is the establishment of marine reserves. A study in 2012 showed that marine reserves can benefit shark populations due to reduced fishing mortality and enhanced availability of prey.

REFERENCES

- Animal Corner, "Caribbean Reef Shark (*Carcharhinus Perezii*)." Caribbean Reef Shark. January 1, 2003. Accessed April 4, 2015. <http://www.animalcorner.co.uk/marine/sharks/caribreefshark.html>.
- Martin, R. Aidan. "A Review Of Shark Agonistic Displays: Comparison Of Display Features And Implications For Shark-human Interactions." *Marine and Freshwater Behaviour and Physiology*, 2006, 3-34.
- Mumby, Peter J., William Skirving, Alan E. Strong, John T. Hardy, Ellsworth F. LeDrew, Eric J. Hochberg, Rick P. Stumpf, and Laura T. David. "Remote Sensing Of Coral Reefs And Their Physical Environment." *Marine Pollution Bulletin*, 2004, 219-28.
- Pikitch, Ellen, Demian Chapman, Elizabeth Babcock, and Mahmood Shivji. "Habitat Use and Demographic Population Structure of Elasmobranchs at a Caribbean Atoll (Glover's Reef, Belize)." *Marine Ecology Progress Series* 302 (2005): 187-97.
- Rogers, Mike. "Caribbean Reef Shark | Cool Facts & Stats." Welcome To SharkSider.com. January 1, 2014. Accessed April 4, 2015. <http://www.sharksider.com/caribbean-reef-shark/>.
- Rosa, R.S., Mancini, P., Caldas, J.P. & Graham, R.T. 2006. *Carcharhinus perezii*. The IUCN Red List of Threatened Species. Version 2014.3. <www.iucnredlist.org>. Downloaded on 06 April 2015.

Author: Shanelle Mooteeram

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Fig. 2. Caribbean reef shark geographic distribution.

[<http://www.sharksider.com/caribbean-reef-shark/>, downloaded 2 April 2015]

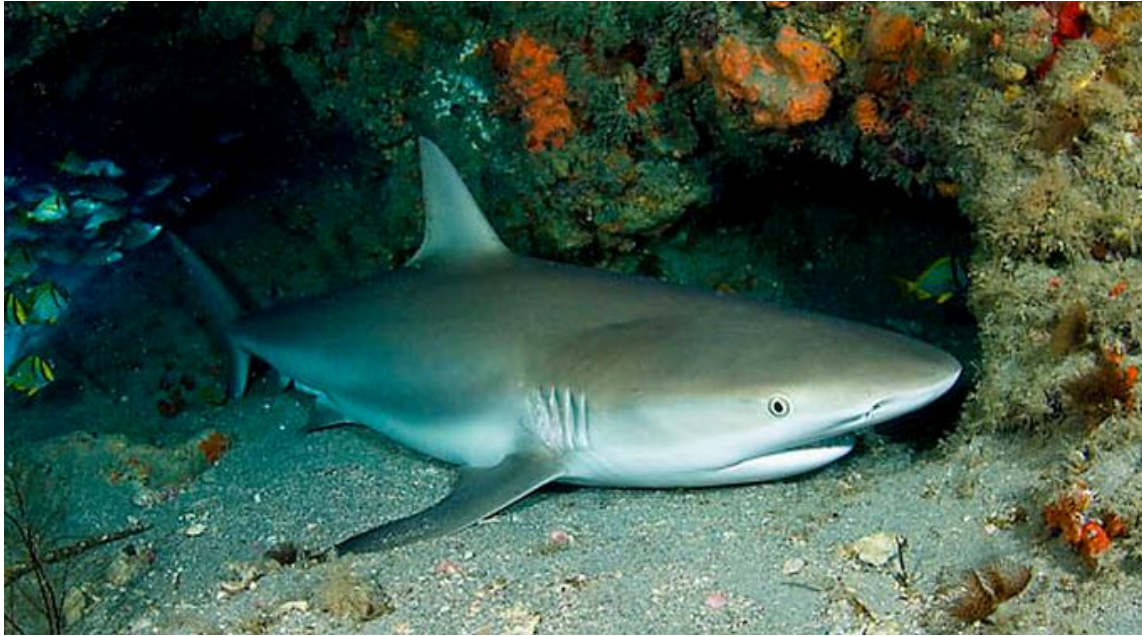


Fig. 3. Caribbean reef shark sleeping in a cave in Florida.

[<http://www.oceanwideimages.com/>, downloaded 1 April 2015]



Fig. 4. Caribbean reef sharks and scuba divers in The Bahamas.

[<http://matthewmeierphoto.photoshelter.com/image/I0000MhAzsJmto5Q>, downloaded 10 March 2015]

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