

= Pondicherry shark =

The Pondicherry shark (*Carcharhinus hemiodon*) is an extremely rare species of requiem shark , in the family Carcharhinidae . A small and stocky gray shark , it grows not much longer than 1 m (3 @. @ 3 ft) , and it has a fairly long , pointed snout . This species can be identified by the shape of its upper teeth , which are strongly serrated near the base and smooth @-@ edged near the tip , and by its first dorsal fin , which is large with a long free rear tip . Furthermore , this shark has prominent black tips on its pectoral fins , second dorsal fin , and caudal fin lower lobe .

The Pondicherry shark was once found throughout Indo @-@ Pacific coastal waters from the Gulf of Oman to New Guinea , and is known to enter fresh water . Currently , the only known sightings of this species since the 1980s are in rivers in Sri Lanka . Fewer than 20 specimens are available for study , and most aspects of its natural history are unknown . It probably feeds on bony fishes , cephalopods , and crustaceans , and gives birth to live young with the embryos forming a placental connection to their mother . The International Union for Conservation of Nature (IUCN) has listed the Pondicherry shark as Critically Endangered . It is probably threatened by intense and escalating fishing pressure throughout its range .

= = Taxonomy = =

The first scientific description of the Pondicherry shark was authored by German biologists Johannes Müller and Jakob Henle in their 1839 *Systematische Beschreibung der Plagiostomen* . Their account was based on a 47 cm (19 in) long immature male from Puducherry (formerly Pondicherry) , India and three more paratypes from the same region . Müller and Henle attributed the name for the new species , *Carcharias* (*Hypoprion*) *hemiodon* , to French zoologist Achille Valenciennes . The specific epithet *hemiodon* is derived from the Greek *hemi* (" half ") and *odon* (" tooth ") .

In 1862 , Theodore Gill elevated *Hypoprion* to the rank of full genus and also placed the Pondicherry shark in its own genus , *Hypoprionodon* , based on the relative positions of the dorsal and pectoral fins . Subsequent authors generally accepted Gill 's first revision but not his second , and thus this species became known as *Hypoprion hemiodon* . In 1985 , Jack Garrick followed up on earlier taxonomic work by Leonard Compagno and synonymized *Hypoprion* with *Carcharhinus* . Another common name for the Pondicherry shark is long nosed shark .

= = Phylogeny = =

The evolutionary relationships of the Pondicherry shark are uncertain . In a 1988 study based on morphological data , Compagno tentatively grouped it with the smalltail shark (*C. porosus*) , blackspot shark (*C. sealei*) , spottail shark (*C. sorrah*) , creek whaler (*C. fitzroyensis*) , whitecheek shark (*C. dussumieri*) , Borneo shark (*C. borneensis*) , and hardnose shark (*C. macroti*) .

= = Description = =

The Pondicherry shark has a robust build and a moderately long , pointed snout . The large and circular eyes are equipped with nictitating membranes . Each nostril is broad with a small , narrow nipple @-@ shaped lobe on the anterior rim . The arched mouth lacks conspicuous furrows or enlarged pores at the corners . The upper and lower jaws contain 14 ? 15 and 12 ? 14 tooth rows on either side respectively ; in addition , there are one or two rows of small teeth at the upper and lower symphyses (jaw midpoints) . The upper teeth have a single narrow , smooth @-@ edged central cusp , flanked on both sides by very large serrations . The lower teeth are narrower and more upright than the uppers , and may be smooth to finely serrated . The five pairs of gill slits are fairly long .

Originating below the fourth pair of gill slits , the pectoral fins are short , broad , and falcate (sickle

@-@ shaped) with pointed tips . The first dorsal fin is tall and falcate with a distinctively long free rear tip , and is positioned just behind the pectoral fin bases . The second dorsal fin is large and tall without a notably elongated free rear tip , and is positioned over or slightly behind the anal fin . Usually there is no midline ridge between the dorsal fins , and when present the ridge is slight . The caudal peduncle has a deep crescent @-@ shaped notch at the upper caudal fin origin . The asymmetrical caudal fin has a well @-@ developed lower lobe and a longer upper lobe with a notch in the trailing margin near the tip .

The skin is covered by overlapping dermal denticles ; each denticle has three horizontal ridges leading to three (rarely five) marginal teeth . This species is gray above and white below , with an obvious pale stripe on the flanks . The pectoral fins , second dorsal fin , and lower caudal fin lobe are prominently tipped in black , while the first dorsal fin and dorsal caudal fin lobe are narrowly edged in black . The maximum size reached by the Pondicherry shark is uncertain due to a lack of large specimens , but is probably not much greater than 1 m (3 @.@ 3 ft) .

= = Distribution and habitat = =

The Pondicherry shark appears to have been broadly distributed in the Indo @-@ Pacific . It may have once been common , as it was reportedly a regular catch off India and Pakistan , but is now extremely rare . Most of the known specimens were collected from India , with more specimens from the Gulf of Oman , Borneo , and Java . There are also less reliable records from the South China Sea , other parts of Southeast Asia such as Vietnam and the Philippines , New Guinea , and northern Australia . This species inhabits inshore waters . Several older sources reported that it could be found in rivers such as the Hooghli River and the Saigon River . These reports may have confused a river shark (*Glyphis* sp .) for the Pondicherry shark ; if accurate , they would suggest this species to be tolerant of low salinity . As of 2016 , these reports have been confirmed ; the only documented Pondicherry sharks in the 21st century were found in the Sri Lankan Menik River .

= = Biology and ecology = =

The diet of the Pondicherry shark is thought to consist of small bony fishes , cephalopods , and crustaceans . A parasite documented from this species is the tapeworm *Acanthobothrium paramanandai* . Like other requiem sharks , it is viviparous with the developing embryos sustained to term via a placental connection to the mother , though specific details are unknown . The smallest known specimen is a female 32 cm (13 in) long , which may be close to the birth size . Sexual maturity is attained at a length of over 60 cm (24 in) .

= = Human interactions = =

Harmless to humans , the Pondicherry shark was caught and used for meat . Fewer than 20 specimens have been deposited in museum collections , most of which were collected prior to 1900 . This shark 's rarity originally led to fears that it may be possibly extinct . However , in 2016 , the Pondicherry shark was rediscovered in the Sri Lankan Menik and Kumbukkam rivers . Two photographs of this species exist ; one taken from above by a group of nature enthusiasts , as well as one taken from the side by a freshwater fish survey . Given that artisanal and commercial fishing activity across its range is heavy , unregulated , and intensifying , the International Union for Conservation of Nature (IUCN) has listed the Pondicherry shark as Critically Endangered and placed a high priority on locating any surviving populations .