

= Bignose shark =

The bignose shark (*Carcharhinus altimus*) is a species of requiem shark , in the family Carcharhinidae . Distributed worldwide in tropical and subtropical waters , this migratory shark frequents deep waters around the edges of the continental shelf . It is typically found at depths of 90 ? 430 m (300 ? 1 @, @ 410 ft) , though at night it may move towards the surface or into shallower water . The bignose shark is plain @-@ colored and grows to at least 2 @. @ 7 ? 2 @. @ 8 m (8 @. @ 9 ? 9 @. @ 2 ft) in length . It has a long , broad snout with prominent nasal skin flaps , and tall , triangular upper teeth . Its pectoral fins are long and almost straight , and there is a ridge on its back between the two dorsal fins .

Hunting close to the sea floor , the bignose shark feeds on bony and cartilaginous fishes , and cephalopods . It is viviparous , meaning the embryos are sustained to term via a placental connection . Females bear litters of three to 15 pups after a 10 @-@ month gestation period . Despite its size , this shark lives too deep to pose much danger to humans . It is caught incidentally by commercial fisheries in many parts of its range ; the meat , fins , skin , liver oil , and offal may be used . The International Union for Conservation of Nature presently lacks enough information to assess the global conservation status of this species . However , the various fishing pressures within its range are cause for concern given its slow reproductive rate , and it may have already declined in the northwestern Atlantic and elsewhere .

= Taxonomy and phylogeny =

Shark expert Stewart Springer described the bignose shark as *Eulamia altima* in a 1950 issue of the scientific journal *American Museum Novitates* . Later authors have regarded the genus *Eulamia* as a synonym of *Carcharhinus* . The specific epithet *altimus* is derived from the Latin *altus* (" deep ") , and refers to the shark 's deepwater habits . The type specimen is an immature female 1 @. @ 3 m (4 @. @ 3 ft) long , caught off Cosgrove Reef in the Florida Keys on April 2 , 1947 . An alternate common name for this species is Knopp 's shark , originally used by Florida fishery workers since before the species was described .

Phylogenetic studies published by Jack Garrick in 1982 and Leonard Compagno in 1988 , based on morphology , placed the bignose shark in the " obscurus group " of *Carcharhinus* , centered on the dusky shark (*C. obscurus*) and the Galapagos shark (*C. galapagensis*) . The group consists of large , triangular @-@ toothed sharks with a ridge between the dorsal fins . Gavin Naylor 's 1992 study , based on allozyme sequences , upheld and further resolved this " ridge @-@ backed " group . The bignose shark was found to be the sister species of the sandbar shark (*C. plumbeus*) , with the two forming one of the group 's two branches .

= Distribution and habitat =

Patchy records from around the world indicate the bignose shark probably has a circumglobal distribution in tropical and subtropical waters . In the Atlantic Ocean , it occurs from Delaware Bay to Brazil , in the Mediterranean Sea , and off West Africa . In the Indian Ocean , it is known in South Africa and Madagascar , the Red Sea , India , and the Maldives . In the Pacific Ocean , it has been recorded from China to Australia , around Hawaii , and from the Gulf of California to Ecuador . It is reportedly common off Florida , the Bahamas , and the West Indies , and rare off Brazil and in the Mediterranean .

The bignose shark is found near the edge of the continental shelf and over the upper continental slope , generally swimming close to the sea floor at depths of 90 ? 430 m (300 ? 1 @, @ 410 ft) . Young sharks may venture into water as shallow as 25 m (82 ft) . Night @-@ time captures of this species from close to the surface suggest it may perform a diel vertical migration , moving from deep water upwards or toward the coast at night . In the northwestern Atlantic , the bignose shark conducts a poorly documented seasonal migration , spending summer off the US East Coast and winter in the Gulf of Mexico and the Caribbean Sea . Individual sharks have been recorded traveling

distances between 1 @, @ 600 and 3 @, @ 200 km (1 @, @ 000 and 2 @, @ 000 mi) .

= = Description = =

Rather heavily built , the bignose shark has a long , broad , and blunt snout with the nostrils preceded by well @-@ developed , triangular flaps of skin . The moderately large , circular eyes are equipped with nictitating membranes (protective third eyelids) . The mouth is broadly curved and lacks obvious furrows at the corners . The upper teeth number 14 ? 16 rows on either side and have tall , broad , triangular cusps with serrated edges ; they are erect at the jaw center and become increasingly oblique towards the sides . The lower teeth number 14 ? 15 rows on either side and have narrow , erect cusps with extremely fine serrations . The five pairs of gill slits are moderately long .

The long and wide pectoral fins have pointed tips and nearly straight margins . The first dorsal fin originates roughly over the rear of the pectoral fin bases ; it is fairly tall and falcate (sickle @-@ shaped) , with a blunt apex and a long free rear tip . The second dorsal fin is relatively large with a short free rear tip , and is positioned slightly ahead of the anal fin . A high midline ridge is present between the dorsal fins . The caudal peduncle has a crescent @-@ shaped notch at the origin of the upper caudal fin margin . The caudal fin has a large lower lobe and a strong ventral notch near the tip of the upper lobe . The dermal denticles are closely spaced but non @-@ overlapping , such as that the skin shows between them ; each is oval with three horizontal ridges leading to marginal teeth . The coloration is gray to bronze above , with a faint pale stripe on the flank , and white below ; sometimes there is a green sheen along the gills . The tips of the fins (except for the pelvic fins) are darker ; this is most obvious in young sharks . Males and females grow to at least 2 @. @ 7 m (8 @. @ 9 ft) and 2 @. @ 8 m (9 @. @ 2 ft) long respectively ; this species possibly reaches 3 m (9 @. @ 8 ft) in length . The maximum weight on record is 168 kg (370 lb) .

= = Biology and ecology = =

The bignose shark feeds mainly on bottom @-@ dwelling bony fishes (including lizardfishes , croakers , flatfishes , and batfishes) , cartilaginous fishes (including *Squalus* dogfishes , *Holohalaelurus* catsharks , *Dasyatis* stingrays , and chimaeras) , and cephalopods . In turn , juveniles may potentially fall prey to larger sharks . Like other requiem sharks , this species is viviparous : when the developing embryos exhaust their supply of yolk , the depleted yolk sac is converted into a placental connection through which the mother delivers nourishment . Females bear litters of three to 15 pups , with seven being typical , following a gestation period of approximately 10 months . A single litter may be sired by two or more males . Birthing has been reported to occur in August and September in the Mediterranean , and in September and October off Madagascar . The newborns measure 70 ? 90 cm (28 ? 35 in) long . Males and females mature sexually at around 2 @. @ 2 and 2 @. @ 3 m (7 @. @ 2 and 7 @. @ 5 ft) long , respectively . The average age of reproductively active individuals is 21 years .

= = Human interactions = =

While large enough to perhaps be dangerous , the bignose shark seldom comes into contact with humans due to its preference for deep water . This species is a bycatch of gillnet , bottom trawl , and deep @-@ set pelagic longline fisheries (particularly those targeting tuna) in many parts of its range . It is regularly taken in Cuban waters and used to produce liver oil , shagreen , and fishmeal . Elsewhere , such as in Southeast Asia , the meat is consumed and the fins shipped to East Asia for shark fin soup . The bignose shark is not used commercially in United States , where it is listed as Prohibited Species under the 2007 Fishery Management Plan for Atlantic tunas , swordfish and sharks , or in Australia .

The International Union for Conservation of Nature has listed the bignose shark as Data Deficient overall , due to inadequate population and fishery monitoring . The species is considered to be of

concern , however , given it is slow @-@ reproducing and faces widespread heavy fishing pressure . There is evidence that its numbers have recently declined in the Maldives . Furthermore , most bignose shark bycatch occurs in international waters , where a single stock may be affected by multiple fisheries . It is listed as a " highly migratory species " under the 1995 UN Agreement on the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks , but thus far this has not led to significant conservation measures . Regionally , the IUCN has assessed the bignose shark as Near Threatened in the northwestern Atlantic . Though specific data are lacking , it is suspected to have declined there because it is commonly misidentified as the sandbar shark , thus the known decline in sandbar shark numbers resulting from US longline fishing may represent a decline in bignose shark numbers , as well . This species has been assessed as Least Concern in Australian waters , where it faces no significant threats .