

= Pyjama shark =

The pyjama shark or striped catshark (*Poroderma africanum*) is a species of catshark , and part of the family Scyliorhinidae , endemic to the coastal waters of South Africa . This abundant , bottom @-@ dwelling species can be found from the intertidal zone to a depth of around 100 m (330 ft) , particularly over rocky reefs and kelp beds . With a series of thick , parallel , dark stripes running along its stout body , the pyjama shark has an unmistakable appearance . It is additionally characterized by a short head and snout with a pair of slender barbels that do not reach the mouth , and two dorsal fins that are placed far back on the body . It can grow up to a length of 1 @.@ 1 m (3 @.@ 6 ft) long .

The pyjama shark is primarily nocturnal , spending most of the day lying motionless and hidden in a cave or crevice or among vegetation . It often forms groups , particularly during summer . This species is an opportunistic predator that feeds on a wide variety of fishes and invertebrates ; it favors cephalopods and frequents the spawning grounds of the chokka squid (*Loligo reynaudi*) . When threatened , it curls into a circle with its tail covering its head . Reproduction is oviparous , with females laying rectangular , dark brown egg cases two at a time year @-@ round . This small and harmless shark adapts well to captivity and is commonly displayed in public aquariums . It is often caught as a bycatch of commercial and recreational fisheries . Many are killed by fishers who regard them as pests . Although there are no data suggesting its numbers have declined , the International Union for Conservation of Nature (IUCN) has assessed the pyjama shark as Near Threatened because of expanding small shark fishery activities within its limited range .

= = Taxonomy = =

The pyjama shark was originally described as *Squalus africanus* by German naturalist Johann Friedrich Gmelin in 1789 , in the thirteenth edition of *Systema Naturae* . He did not designate a type specimen . In 1837 , Scottish physician and zoologist Andrew Smith created the new genus *Poroderma* for this species and the related leopard catshark (*P. pantherinum* , at the time believed to be multiple species) . In 1908 , the pyjama shark was made the type species of the genus by American zoologist Henry Weed Fowler .

= = Distribution and habitat = =

A bottom @-@ dwelling inhabitant of temperate inshore waters , the pyjama shark is found off South Africa , from Table Bay off Cape Town to north of East London . It is most abundant off the Western Cape , and may venture as far as Saldanha Bay in the west and KwaZulu @-@ Natal in the east ; old records from Mauritius , Madagascar , and Zaire are almost certainly erroneous . The pyjama shark is commonly encountered in very shallow intertidal and littoral waters no more than 5 m (16 ft) deep , though in and around Algoa Bay it occurs at depths of 50 ? 100 m (160 ? 330 ft) and has been reported to 108 m (354 ft) . It favors rocky reefs and beds of *Ecklonia* kelp .

= = Description = =

The pyjama shark is the larger and thicker @-@ bodied of the two *Poroderma* species , growing to 1 @.@ 1 m (3 @.@ 6 ft) long and 7 @.@ 9 kg (17 lb) or more in weight . Both sexes grow to roughly the same maximum size . The head and snout are short and slightly flattened , with a narrowly parabolic outline when viewed from above or below . Each nostril is split into tiny incurrent and excurrent openings by a flap of skin in front ; the flap has a three @-@ lobed shape with the central lobe forming a long , conical barbel . The barbels are thicker than in the leopard catshark , and do not reach the mouth . The eyes are horizontally oval and placed rather high on the head , with rudimentary nictitating membranes (protective third eyelids) and a thick ridge running underneath . The sizable mouth forms a broad arch , with short furrows extending from the corners onto both the upper and lower jaws ; the upper teeth are exposed when the mouth is closed . There

are 18 ? 25 and 14 ? 24 tooth rows on either side of the upper and lower jaws , respectively . The teeth have a slender central cusp flanked by a pair of small cusplets ; those of adult males are slightly thicker than those of females .

The body is fairly compressed from side to side and tapers towards the tail . The two dorsal fins are placed far back : the first originates over the rear of the pelvic fins while the second originates over the midpoint of the anal fin . The first dorsal is much larger than the second . The pectoral fins are large and broad . The pelvic fins are lower than the pectorals but their bases are about equal in length . Adult males have a pair of short , thick claspers , with the inner margins of the pelvic fins partially fused over them to form an " apron " . The short and broad caudal fin has an indistinct lower lobe and a ventral notch near the tip of the upper lobe . The skin is very thick and bears well @-@ calcified dermal denticles ; each denticle has an arrowhead @-@ shaped crown with three posterior points , mounted on a short stalk . The dorsal coloration is distinctive , consisting of 5 ? 7 thick , parallel , dark stripes running from the snout to the caudal peduncle on a variably grayish or brownish background ; the stripes become broken near the tail and the belly . In some sharks , the main stripe on either side may fork behind the eye , the stripes may be split in two by lighter central lines , or one or more large dark spots may be present . The underside is pale , sometimes with light gray spotting , and clearly demarcated from the flank color . Young sharks resemble the adults , but may be much lighter or have much darker stripes . An albino specimen has been recorded from False Bay .

= = Biology and ecology = =

Rather slow @-@ swimming , the pyjama shark spends most of the day resting in caves or crevices or amongst kelp , emerging at night to actively forage for food . Many individuals may congregate at a single spot , particularly in summer . This species falls prey to larger sharks , and is one of the cartilaginous fish most frequently consumed by the broadnose sevengill shark (*Notorynchus cepedianus*) . When threatened , it often curls into a circle with its tail covering its head , in a similar fashion to the shysharks (*Haploblepharus*) . Its eggs are fed upon by the whelks *Burnupena papyracea* and *B. lagenaria* , which can pierce the outer covering to extract the yolk within . Like other sharks , the pyjama shark maintains osmotic balance with the environment by regulating its internal concentration of urea and other nitrogenous wastes . Experiments have shown that the shark 's capacity for osmoregulation is dependent on how well it has fed .

The pyjama shark feeds on a wide variety of small animals , including bony fishes such as anchovies , gurnards , and hakes , hagfishes , smaller sharks and rays and their egg cases , crustaceans , cephalopods , bivalves , and polychaete worms ; it has also been known to scavenge on fish offal . Although it has a predilection for cephalopods , the dietary composition of this opportunistic predator generally reflects the locally available prey types . For example , in False Bay the Cape rock lobster (*Jasus lalandii*) is the most important food source , followed by cephalopods and then fish . Pyjama sharks have been observed seizing and tearing off tentacles from octopus and cuttlefish with a twisting motion ; on one occasion three sharks were seen attacking an octopus simultaneously in this manner . During mass spawnings of the chokka squid (*Loligo vulgaris reynaudi*) , which occur unpredictably year @-@ round but peak from October to December , pyjama sharks deviate from their nocturnal habits and gather in substantial numbers inside the squids ' " egg beds " during daytime . The sharks conceal their heads amongst the egg masses , while their stripes break up the outlines of their bodies . As the female squid descend to the sea floor to attach their eggs , guarded by the males , they become vulnerable to the sharks ' ambush attacks .

An oviparous species , both male and female pyjama sharks seem to be reproductively active throughout the year . Adult females have a single functional ovary and two functional oviducts , with a single egg maturing in each at a time . The egg is contained in a tough , rectangular , dark brown capsule 9 @.@ 5 cm (3 @.@ 7 in) long and 4 @.@ 5 cm (1 @.@ 8 in) across , with long tendrils at the corners that enable the female to fasten the capsule to underwater structures such as algae stipes or gorgonians . Eggs maintained in aquariums hatch in approximately five and a half months ,

with the hatching shark measuring 14 ? 15 cm (5 @. @ 5 ? 5 @. @ 9 in) long . Males and females begin to mature sexually at 78 ? 81 cm (31 ? 32 in) and 79 ? 83 cm (31 ? 33 in) long respectively , and all sharks are adult by a length of 89 cm (35 in) .

= = Human interactions = =

Among the most common South African catsharks , the pyjama shark is harmless to humans and difficult to approach underwater . Because of its small size , attractive appearance , and hardiness , it is popularly exhibited by public aquariums . The aquarium trade supports a small fishery targeting this species and the similar leopard catshark . Large numbers of pyjama sharks are caught incidentally by commercial fisheries using longlines , gillnets , beach @-@ seines , and bottom trawls ; they are also readily hooked by recreational anglers , especially during the summer when they aggregate . Although edible , most are discarded while some are used for lobster bait . The toll taken by fishery bycatch is likely greatly underestimated , as many fishers who use line gear regard pajama sharks as pests that " steal " bait , and kill them before discarding them .

The International Union for Conservation of Nature (IUCN) has listed the pyjama shark as Near Threatened , citing its small distribution and a recent increase in fishing pressure on small sharks in the region . However , there is no evidence to suggest that its population has declined . There are no specific conservation measures in place for this species , though its range encompasses two marine reserves . The South African Sea Fisheries Research Institute is considering legally decommercializing the pyjama shark , which would limit the degree to which it can be targeted by commercial fisheries .