

= Australian swellshark =

Not to be confused with the draughtsboard shark , *Cephaloscyllium isabellum* , of New Zealand .

The Australian swellshark or draughtboard shark (*Cephaloscyllium laticeps*) is a species of catshark , and part of the family Scyliorhinidae , endemic to southern Australia . This bottom @-@ dwelling species can be found on the continental shelf down to a depth of 220 m (720 ft) . Usually measuring 1 m (3 ft) long , it is a stout @-@ bodied , broad @-@ headed shark with a short tail and a first dorsal fin much larger than the second . It can be identified by its variegated dorsal coloration of brown or gray patches and numerous spots .

Australian swellsharks are sedentary and mainly nocturnal , with most individuals remaining within the same local area throughout the year . It feeds on small crustaceans , cephalopods , and fishes . When threatened , it responds by rapidly taking in water or air to inflate its body , hence the name " swellshark " . This shark is oviparous and females lay pairs of distinctively ridged egg capsules at 20 ? 30 day intervals . The eggs hatch after 11 ? 12 months . Harmless and of little commercial interest , many Australian swellsharks are caught incidentally in gillnets and bottom trawls but usually survive to be released because of their extreme hardness . As a result , the International Union for Conservation of Nature (IUCN) has assessed this species as of Least Concern .

= = Taxonomy = =

The first scientific description of the Australian swellshark , as *Scyllium laticeps* , was published in 1853 by French zoologist Auguste Duméril , in the scientific journal *Revue et Magasin de Zoologie* . The type specimen was a 79 cm (31 in) long male caught off Tasmania . The specific epithet *laticeps* is derived from the Latin *latus* , meaning " broad " , with the suffix *ceps* , meaning " head " . Other common names for this species include flop guts (a reference to its ability to inflate) , Isabell 's swell shark , nutcracker shark , rock shark , sleepy Joe , and spotted swellshark . This species is almost identical to the draughtsboard shark (*C. isabellum*) of New Zealand ; the two species differ in coloration and the form of their egg cases (ridged in *C. laticeps* versus smooth in *C. isabellum*) .

= = Description = =

The Australian swellshark has a stocky , rounded body that tapers significantly to the short caudal peduncle . The head comprises no more than a fifth of the total length and is broad and moderately flattened , with a very short , thick , blunt snout . The nostrils are divided into small incurrent and excurrent openings by short , triangular flaps of skin that do not reach the mouth . The mouth is extremely large , without furrows at the corners . The teeth are numerous and small with multiple cusps ; the upper teeth are exposed when the mouth is closed . The large , oval eyes are placed somewhat on the upper surface of the head , and have rudimentary nictitating membranes (protective third eyelids) and ridges underneath .

There are two dorsal fins , the first much larger than the second . The first dorsal originates over the forward half of the pelvic fin bases , while the second is located over the anal fin . The pectoral fins are large and broad , and the anal fin is larger than the second dorsal fin . The short and broad caudal fin has an indistinct lower lobe and a prominent ventral notch near the tip of the upper lobe . The skin is thick and covered by well @-@ calcified , arrowhead @-@ shaped dermal denticles , which are more sparse in young sharks . The back and sides are light gray to brown , with an irregular pattern of close @-@ set darker saddles and blotches along with many dark (sometimes light) spots , and a dark stripe from under the eye to the pectoral fin origins . The fins do not have sharply lighter margins . The underside is cream @-@ colored , with some mottling on the fins and often a dark stripe running down the middle in adults . The maximum known length is 1 @. @ 5 m (4 @. @ 9 ft) , though few exceed 1 @. @ 0 m (3 @. @ 3 ft) .

= = Distribution and habitat = =

The Australian swellshark inhabits the continental shelf of southern Australia , from the Recherche Archipelago off Western Australia to Jervis Bay in New South Wales , including Tasmania . It is commonly found on or near the bottom amongst rocky reefs or seaweed beds , from close to shore to a depth of 220 m (720 ft) .

= = Biology and ecology = =

The most abundant catshark species in the coastal waters of southern Australia , the Australian swellshark is a generally sluggish swimmer that is more active at night . During the day , it is often found resting singly or in groups under ledges or inside caves . Tracking studies have shown that some individuals are continuously active for months at a time , while others alternate activity with periods of stationary rest lasting up to five days . Most Australian swellsharks present within a given region tend to remain there year @-@ round , frequenting established feeding areas or preferred habitats . On the other hand , a minority of sharks have been recorded covering distances of up to 300 km (190 mi) . This extremely hardy species can survive for more than a day out of water .

One of the higher @-@ level predators within its ecosystem , the Australian swellshark feeds on crustaceans (particularly crabs and rock lobsters) , cephalopods (including squid and octopus) , and small fishes . Even large @-@ sized prey tends to be swallowed whole ; the long periods of rest exhibited by some sharks may relate to digestion . Like the other members of its genus , this shark is capable of rapidly inflating its body by taking water or air into its stomach , as a defense against predators . These include larger fishes , such as the broadnose sevengill shark (*Notorynchus cepedianus*) , and marine mammals . By inflating , the shark may be able to wedge itself inside crevices , make itself harder to swallow , or simply intimidate a would @-@ be predator . Marine snails are known to prey upon this shark 's eggs . The Australian swellshark serves as a host to a number of parasite species , but these are poorly documented .

= = = Life history = = =

The Australian swellshark is oviparous . Males have larger teeth than females , with which to bite and hold onto them for copulation . Whether there is a specific mating season is uncertain , though in terms of sperm production males are capable of breeding year @-@ round . Females have a single functional ovary and two oviducts , ovulating a single egg into each at a time . They can store sperm for at least 15 months . Females produce eggs throughout the year , laying them in pairs approximately once every 20 days from January to June , and once every 30 days the rest of the year . The second egg in a pair is deposited 12 ? 24 hours after the first .

The pale , flask @-@ shaped egg capsules measure 13 cm (5 in) long and 5 cm (2 in) across , and bear 19 ? 27 crosswise ridges . There are long , curling tendrils at the four corners , which allow the female to attach the capsule to seaweed or other bottom structures . In captivity , the embryo develops external gills at two months old , which are retained until it is five months old , at which time the internal gills take over and the first pigmentation appears . At six months , embryonic growth accelerates and the yolk sac begins to shrink , disappearing by nine to ten months of age . Hatching usually occurs at eleven to twelve months ; the newly emerged young are miniature versions of the adults measuring 14 cm (6 in) long . Males mature sexually at a length of 71 ? 87 cm (28 ? 34 in) , and females at 75 ? 86 cm (30 ? 34 in) .

= = Human interactions = =

The Australian swellshark is harmless to humans and seldom utilized , though recently in parts of Tasmania some have begun to be marketed as a source of " flake " . It is regarded as a nuisance by lobster fishers due to its habit of entering traps to eat the contents . Every year , substantial numbers of Australian swellsharks are caught as bycatch in the southeast Australian shark gillnet fishery , and more in bottom trawls and on longlines . These animals are usually released , and likely suffer minimal mortality due to their resilience . Since this species at present faces little risk from

fisheries , the International Union for Conservation of Nature (IUCN) has listed it under Least Concern . Although commercial fisheries reported drops in Australian swellshark catches from 1973 to 1976 and 1998 to 2001 , these appeared to have resulted from changing fishing habits rather than actual population declines . Nevertheless , as a precaution the government of Tasmania has instituted a possession limit of two sharks per person or five sharks per boat per day .