

= Nursehound =

The nursehound ( *Scyliorhinus stellaris* ), also known as the large @-@ spotted dogfish , greater spotted dogfish , or bull huss , is a species of catshark , belonging to the family Scyliorhinidae , found in the northeastern Atlantic Ocean . It is generally found among rocks or algae at a depth of 20 ? 60 m ( 66 ? 197 ft ) . Growing up to 1 @.@ 6 m ( 5 @.@ 2 ft ) long , the nursehound has a robust body with a broad , rounded head and two dorsal fins placed far back . It shares its range with the more common and closely related small @-@ spotted catshark ( *S. canicula* ) , which it resembles in appearance but can be distinguished from , in having larger spots and nasal skin flaps that do not extend to the mouth .

Nursehounds have nocturnal habits and generally hide inside small holes during the day , often associating with other members of its species . A benthic predator , it feeds on a range of bony fishes , smaller sharks , crustaceans , and cephalopods . Like other catsharks , the nursehound is oviparous in reproduction . Females deposit large , thick @-@ walled egg cases , two at a time , from March to October , securing them to bunches of seaweed . The eggs take 7 ? 12 months to hatch . Nursehounds are marketed as food in several European countries under various names , including " flake " , " catfish " , " rock eel " , and " rock salmon " . It was once also valued for its rough skin ( called " rubskin " ) , which was used as an abrasive . The International Union for Conservation of Nature ( IUCN ) has assessed the nursehound as Near Threatened , as its population in the Mediterranean Sea seems to have declined substantially from overfishing .

= = Taxonomy = =

The first scientific description of the nursehound was published by Carl Linnaeus , in the 1758 tenth edition of *Systema Naturae* . He gave it the name *Squalus stellaris* , the specific epithet *stellaris* being Latin for " starry " . No type specimen was designated . In 1973 , Stewart Springer moved this species to the genus *Scyliorhinus* . The common name " nursehound " came from an old belief by English fishermen that this shark attends to its smaller relatives , while the name " huss " may have come from a distortion of the word " nurse " over time .

= = Distribution and habitat = =

The nursehound is found in the northeastern Atlantic from southern Norway and Sweden to Senegal , including off the British Isles , throughout the Mediterranean Sea , and the Canary Islands . It may occur as far south as the mouth of the Congo River , though these West African records may represent misidentifications of the West African catshark ( *S. cervigoni* ) . Its range seems to be rather patchy , particularly around offshore islands , where there are small local populations with limited exchange between them . The nursehound can be found from the intertidal zone to a depth of 400 m ( 1 @.@ 300 ft ) , though it is most common between 20 m ( 66 ft ) and 60 ? 125 m ( 197 ? 410 ft ) . This bottom @-@ dwelling species prefers quiet water over rough or rocky terrain , including sites with algal cover . In the Mediterranean , it favors algae @-@ covered coral .

= = Description = =

The nursehound attains a length of 1 @.@ 6 m ( 5 @.@ 2 ft ) , though most measure less than 1 @.@ 3 m ( 4 @.@ 3 ft ) . This shark has a broad , rounded head and a stout body that tapers towards the tail . The eyes are oval in shape , with a thick fold of skin on the lower rim but no nictitating membrane . Unlike in the small @-@ spotted catshark , the large flaps of skin beside the nares do not reach the mouth . In the upper jaw , there are 22 ? 27 tooth rows on either side and 0 ? 2 teeth at the symphysis ( center ) ; in the lower jaw , there are 18 ? 21 tooth rows on either side and 2 ? 4 teeth at the symphysis . The teeth are Y @-@ shaped and smooth @-@ edged ; the anterior teeth have a single central cusp , while the posterior teeth have an additional pair of lateral cusplets . Towards the rear of the jaws , the teeth become progressively smaller and more angled , with

proportionately larger lateral cusplets . The five pairs of gill slits are small , with the last two over the pectoral fin bases .

The two dorsal fins are placed far back on the body ; the first is larger than the second and originates over the bases of the pelvic fins . The pectoral fins are large . In males , the inner margins of the pelvic fins are merged into an " apron " over the claspers . The caudal fin is broad and nearly horizontal , with an indistinct lower lobe . The skin is very rough , due to a covering of large , upright dermal denticles . The nursehound has small black dots covering its back and sides , interspersed with brown spots of varying shapes larger than the pupil , on a grayish or brownish background . The pattern is highly variable across individuals and ages ; there may also be white spots , or the brown spots may be expanded so that almost the whole body is dark , or a series of faint " saddles " may be present . The underside is plain white .

#### = = Biology and ecology = =

Primarily nocturnal , nursehounds spend the day inside small holes in rocks and swim into deeper water at night to hunt . Sometimes two sharks will squeeze into the same hole , and several individuals will seek out refuges within the same local area . In one tracking study , a single immature nursehound was observed to use five different refuges in succession over a period of 168 days , consistently returning to each one over a number of days before moving on . Nursehounds may occupy refuges to hide from predators , avoid harassment by mature conspecifics , and / or to facilitate thermoregulation . In captivity , these sharks are gregarious and tend to rest in groups , though the individuals comprising any particular group changes frequently . This species is less common than the small @-@ spotted catshark .

The nursehound feeds on a variety of benthic organisms , including bony fishes such mackerel , deepwater cardinalfishes , dragonets , gurnards , flatfishes , and herring , and smaller sharks such as the small @-@ spotted catshark . It also consumes crustaceans , in particular crabs but also hermit crabs and large shrimp , and cephalopods . Given the opportunity , this shark will scavenge . Adults consume relatively more bony fish and cephalopods , and fewer crustaceans , than juveniles . Known parasites of this species include the monogeneans *Hexabothrium appendiculatum* and *Leptocotyle major* , the tapeworm *Acanthobothrium coronatum* , the trypanosome *Trypanosoma scyllii* , the isopod *Ceratothoa oxyrrhynchaena* , and the copepod *Lernaeopoda galei* . The netted dog whelk ( *Nassarius reticulatus* ) preys on the nursehound 's eggs by piercing the case and extracting the yolk .

#### = = Life history = =

Like other members of its family , the nursehound is oviparous . Known breeding grounds include the River Fal estuary and Wembury Bay in England , and a number of coastal sites around the Italian Peninsula , in particular the Santa Croce Bank in the Gulf of Naples . Adults move into shallow water in the spring or early summer , and mate only at night . The eggs are deposited in the shallows from March to October . Although a single female produces 77 ? 109 oocytes per year , not all of these are ovulated and estimates of the actual number of eggs laid range from 9 to 41 . The eggs mature and are released two at a time , one from each oviduct . Each egg is enclosed in a thick , dark brown case measuring 10 ? 13 cm ( 3 @. @ 9 ? 5 @. @ 1 in ) long and 3 @. @ 5 cm ( 1 @. @ 4 in ) wide . There are tendrils at the four corners , that allow the female to secure the egg cases to bunches of seaweed ( usually *Cystoseira* spp. or *Laminaria saccharina* ) .

Eggs in the North Sea and the Atlantic take 10 ? 12 months to hatch , while those from the southern Mediterranean take 7 months to hatch . The length at hatching is 16 cm ( 6 @. @ 3 in ) off Britain , and 10 ? 12 cm ( 3 @. @ 9 ? 4 @. @ 7 in ) off France . Newly hatched sharks grow at a rate of 0 @. @ 45 ? 0 @. @ 56 mm ( 0 @. @ 018 ? 0 @. @ 022 in ) per day , and have prominent saddle markings . Sexual maturity is attained at a length of 77 ? 79 cm ( 30 ? 31 in ) , which corresponds to an age of four years if hatchling growth rates remain constant . This species has a lifespan of at least 19 years .

= = Human interactions = =

Nursehounds are generally harmless to humans . However , 19th @-@ century British naturalist Jonathan Couch noted that " although not so formidable with its teeth as many other sharks , this fish is well able to defend itself from an enemy . When seized it throws its body round the arm that holds it , and by a contractile and reversed action of its body grates over the surface of its enemy with the rugged spines of its skin , like a rasp . There are few animals that can bear so severe an infliction , by which their surface is torn with lacerated wounds . " This shark is displayed by many public aquariums and has been bred in captivity .

The rough skin ( called " rubskin " ) of the nursehound was once used to polish wood and alabaster , to smooth arrows and barrels , and to raise the hairs of beaver hats as a replacement for pumice . Rubskin was so valued that a pound of it was worth a hundredweight of sandpaper . The liver was also used as a source of oil , and the carcasses cut up and used to bait crab traps . The meat of this species is marketed fresh or dried and salted , though it is considered " coarse " in some quarters . In the United Kingdom , it is one of the species sold under the names " flake " , " catfish " , " huss " " rock eel " , or " rock salmon " . In France , it is sold as grande rousette or saumonette , as after being skinned and beheaded it resembles salmon . This species is also sometimes processed into fishmeal , or its fins dried and exported to the Asian market . In European waters , commercial production of this species is led by France , followed by the UK and Portugal ; it is caught using bottom trawls , gillnets , bottom set longlines , handlines and fixed bottom nets . In 2004 , a total catch of 208 tons was reported from the northeastern Atlantic .

The impact of fishing activities on the nursehound is difficult to assess as species @-@ specific data is generally lacking . This species is more susceptible to overfishing than the small @-@ spotted catshark because of its larger size and fragmented distribution , which limits the recovery potential of depleted local stocks . There is evidence that its numbers have declined significantly in the Gulf of Lion , off Albania , and around the Balearic Islands . In the upper Tyrrhenian Sea , its numbers have fallen by over 99 % since the 1970s . These declines have led the International Union for Conservation of Nature ( IUCN ) to list the nursehound under Near Threatened .