

= Bramble shark =

The bramble shark (*Echinorhinus brucus*) is one of the two species of sharks in the family Echinorhinidae . Aside from the eastern Pacific Ocean , it is found in tropical and temperate waters worldwide . This rarely encountered shark swims close to the bottom of the seafloor , typically at depths of 400 ? 900 m (1 @,@ 300 ? 3 @,@ 000 ft) , though it may enter much shallower water . The bramble shark has a stout body with two small dorsal fins positioned far back and no anal fin . It can be readily identified by the large , thorn @-@ like dermal denticles scattered over its body , some of which may be fused together . It is purplish brown or black in color and grows up to 3 @.@ 1 m (10 ft) long .

The diet of the bramble shark includes smaller sharks , bony fishes , and crabs , which this slow @-@ moving species may capture via suction . It is aplacental viviparous , with females producing litters of 15 ? 52 pups . Harmless to humans , it is an occasional bycatch of commercial and recreational fishers , and may be used for fishmeal and liver oil . The International Union for Conservation of Nature (IUCN) presently lacks enough information to assess the conservation status of this species . However , its population has declined substantially in the northeastern Atlantic since the 18th and 19th centuries , likely because of overfishing .

= = Taxonomy = =

The original description of the bramble shark was authored by French naturalist Pierre Joseph Bonnaterre in the 1788 *Tableau encyclopédique et méthodique des trois regnes de la nature* . He named it *Squalus brucus* , from the Greek *brux* or *bruchios* meaning " from the depths of the sea " . The type specimen has since been lost . In 1816 , Henri de Blainville created the genus *Echinorhinus* for this species . Until the 1960s , specimens of the prickly shark (*E. cookei*) caught in the Pacific Ocean were misidentified as bramble sharks . Other common names for this species are spinous shark and spiny shark .

= = Description = =

The bramble shark has a thick , cylindrical body and a somewhat flattened head . The snout is blunt and shorter than the width of the mouth , with widely spaced nostrils that are preceded by small flaps of skin . The eyes lack nictitating membranes ; the tiny spiracles are located well behind them . The wide , curved mouth bears very short furrows at the corners . There are 20 ? 26 upper and 22 ? 26 lower tooth rows ; each tooth is knife @-@ like , with a single main cusp and up to three cusplets on either side . There are five pairs of gill slits , with the fifth pair the longest .

The pectoral fins are short and angular , while the pelvic fins are long and relatively large . The dorsal fins are small , with the first dorsal fin origin lying behind the pelvic fin origins . There is no anal fin . The caudal peduncle is robust and lacks notches at the caudal fin origins . The asymmetrical caudal fin has an indistinct lower lobe and an upper lobe without a notch in the trailing margin .

The skin is covered by a layer of foul @-@ smelling mucus several millimeters thick . The dermal denticles are scattered irregularly over the body and vary greatly in size , measuring up to 1 @.@ 5 cm (0 @.@ 59 in) across . Each denticle is thorn @-@ like in shape , with ridges radiating out from the central point over the base . As many as ten denticles may be fused together to form multi @-@ pointed plates . The underside of the snout and the area around the mouth is densely covered by small denticles in sharks under 90 cm (35 in) long ; these denticles become larger and sparser in larger sharks . This species is brown to black above , with a metallic purplish hue , and paler below ; some individuals have red or black blotches . There is a report of one specimen that had a greenish glow when freshly caught . The bramble shark may reach 3 @.@ 1 m (10 ft) in length . The maximum weight on record is 200 kg (440 lb) for a 2 @.@ 8 m (9 @.@ 2 ft) long female .

= = Distribution and habitat = =

Records of the bramble shark are fairly rare and originate from widely scattered locations in tropical and temperate waters worldwide , save for the eastern Pacific Ocean . Most have come from the eastern Atlantic and western Indian Oceans , where its range extends from the North Sea and the British Isles to southern Mozambique , including the Mediterranean Sea . In the western Atlantic , this species is represented by a handful of specimens from Massachusetts , North Carolina , Louisiana , Tobago , Brazil , and Argentina . In the Indo @-@ Pacific , it is known from Oman , India , southern Japan , southern Australia , New Zealand , and possibly Kiribati .

Found close to the sea floor , the bramble shark most commonly inhabits continental and insular shelves and slopes at depths of 400 ? 900 m (1 @,@ 300 ? 3 @,@ 000 ft) . However , it has been reported from as shallow as 18 m (59 ft) , in areas with upwellings of cold water , and from as deep as 1 @,@ 214 m (3 @,@ 983 ft) . At least in European waters , this species may migrate into shallower depths of 20 ? 200 m (66 ? 656 ft) during the summer .

= = Biology and ecology = =

Sluggish in nature , the bramble shark feeds on smaller sharks (including the spiny dogfish , *Squalus acanthias*) , bony fishes (including ling , catfishes , and lizardfishes) , and crabs . The large size of its pharynx , relative to its mouth , suggests that it may capture prey by suction . This species is aplacental viviparous ; females have two functional ovaries and two uteruses . Recorded litter sizes have ranged from 15 to 52 , and newly born pups have been estimated to measure 40 ? 50 cm (16 ? 20 in) long . The dermal denticles in near @-@ term embryos are underdeveloped , appearing as minute spines located within open pits in the skin . The size at sexual maturity is uncertain ; the smallest known mature males and females are 1 @.@ 5 m (4 @.@ 9 ft) and 2 @.@ 1 m (6 @.@ 9 ft) long respectively .

= = Human interactions = =

The bramble shark is not known to pose a danger to humans . It is caught incidentally by commercial fisheries in bottom trawls and on fishing line , as well as by sport anglers . In the eastern Atlantic , this species is processed into fishmeal but has little commercial significance . Its liver oil is highly valued in South Africa as medicine , whereas in India the oil is considered poor and is used to coat canoes to discourage woodboring beetles . Historical accounts suggest that bramble shark numbers in the northeastern Atlantic have fallen markedly since the 18th and 19th centuries , such as that it is now extremely rare off northern Europe and in the Mediterranean . This decline has been attributed to fishing pressure , to which this species may be highly vulnerable as large , deep @-@ sea sharks generally have slow growth rates and long lifespans . Regarding the species as a whole , the International Union for Conservation of Nature (IUCN) lacks sufficient data for an assessment beyond Data Deficient .