

= Australian weasel shark =

The Australian weasel shark (*Hemigaleus australiensis*) is an uncommon species of ground shark in the family Hemigaleidae . It inhabits shallow waters off northern Australia to a depth of 170 m (560 ft) ; smaller sharks frequent sand and seagrass habitat and shift to coral reefs as they grow older . A slim , drab species reaching a length of 1 @. @ 1 m (3 @. @ 6 ft) , it has sickle @- @ shaped fins with dark tips on the second dorsal fin and caudal fin upper lobe . Its upper teeth are broad with strong serrations only on the trailing edge . The lateral line along each side is prominent and exhibits a downward curve below the second dorsal fin .

Feeding almost exclusively on octopuses and other cephalopods , the Australian weasel shark mostly hunts near the sea floor . It is viviparous , with the developing embryos nourished through a placental connection and born after a six @- @ month gestation period . This species is productive for a shark , with females bearing litters of 1 ? 19 pups usually twice per year . The Australian weasel shark is caught by trawl and to a lesser extent gillnet and longline fisheries , though not in such numbers that its population is threatened . Thus , it has been listed as Least Concern by the International Union for Conservation of Nature (IUCN) .

= = Taxonomy = =

Originally regarded as conspecific with the sicklefin weasel shark (*H. microstoma*) , the Australian weasel shark was first documented as a potentially distinct species by John Stevens and Glen Cuthbert in 1983 . Its scientific description was authored by William White , Peter Last , and Leonard Compagno in a 2005 volume of the scientific journal Zootaxa . They gave it the specific epithet *australiensis* on the basis of its range , and designated as the type specimen an adult male 92 cm (36 in) long caught at a depth of 41 m (135 ft) off Geraldton , Western Australia .

= = Description = =

Reaching 1 @. @ 1 m (3 @. @ 6 ft) in length , the Australian weasel shark has a slender , spindle @- @ shaped body and a moderately long head with a thick , rounded snout . The large , oval eyes possess nictitating membranes and have notched posterior rims . Tiny spiracles are located behind and above the eyes . The large nostrils are preceded by fairly long , triangular flaps of skin . The short , curved mouth bears prominent furrows at the corners . There are 28 ? 30 upper and 46 ? 52 lower tooth rows , which are not visible when the mouth is closed ; the upper teeth are broad and angled with large serrations on the trailing edge only , whereas the lower teeth are thin and upright with smooth edges . There are five pairs of fairly short gill slits .

All of the fins , particularly the narrow pectoral fins , are falcate (sickle @- @ shaped) to some degree . The medium @- @ sized first dorsal fin originates just behind the pectoral fin rear tips . The second dorsal fin is about two @- @ thirds as tall as the first , and there is no midline ridge running between them . The pelvic fins are broad and slightly larger than the anal fin . The anal fin has a strong notch in the trailing margin and is positioned slightly behind the second dorsal fin . The caudal peduncle bears a crescent @- @ shaped notch at the upper origin of the caudal fin . The asymmetrical caudal fin has a well @- @ developed lower lobe and a long , narrow upper lobe with a ventral notch near the tip . The prominent lateral line curves downward below the second dorsal fin . The skin is densely covered by small , overlapping dermal denticles ; each bears five horizontal ridges leading to marginal teeth . This species is light grey to bronze above , darkening at the tips of the second dorsal fin and upper caudal fin lobe (though this may be indistinct in larger sharks) , and pale below . The underside is off @- @ white , and the first dorsal fin has a pale trailing margin .

= = Distribution and habitat = =

The Australian weasel shark inhabits continental and insular shelves off northern Australia , from Geraldton in Western Australia to Brunswick Heads in New South Wales . Additional records from

Papua New Guinea are as yet unconfirmed . It seems to be naturally rather uncommon . This species tends to swim close to the sea floor and can be found from inshore waters down to 170 m (560 ft) deep . Juveniles and small adults are generally found in sandy areas with seagrass cover , while large adults occur more around coral reefs .

= = Biology and ecology = =

The Australian weasel shark feeds predominantly on octopuses such as *Callistoctopus* spp . , either swallowing them whole or removing the arms first . Octopuses become increasingly important to its diet with age , such that sharks over 90 cm (35 in) long eat almost nothing else ; this increasing dietary specialisation is accompanied by a habitat shift toward coral reefs , which may serve to reduce competition between older and younger individuals . Bobtail squids represent a minor secondary food source , particularly for smaller sharks . In addition , other cephalopods , mud lobsters , crabs , and echinoderms are rarely consumed . This species probably hunts mostly at dawn and dusk ; it typically seeks bottom @-@ dwelling prey but will also rise into the water column if opportunity presents , such as during seasonal aggregations of broad squid (*Uroteuthis etheridgei*) . Known parasites of the Australian weasel shark include the tapeworms *Nybelinia mehlhorni* , *Paraorygmatobothrium kirstenae* , and *P. taylori* , and the copepods *Perissopus dentatus* and *Pseudopandarus australis* .

Like other members of its family , the Australian weasel shark is viviparous with the developing embryos sustained through a placental connection with the mother . Mature females have a single functional ovary and two functional uteruses . The gestation period is six months long and typically two litters are produced annually , one around February and the other around September . Litter size varies from 1 to 19 pups (average 8) . The embryos lose their external gills at a length of 13 cm (5 @. @ 1 in) , have developed colouration by a length of 23 cm (9 @. @ 1 in) , and are born at a length of 30 cm (12 in) . Males and females reach sexual maturity at approximately 60 cm (24 in) and 65 cm (26 in) long respectively .

= = Human interactions = =

Harmless to humans , the Australian weasel shark is commonly caught by prawn and fish trawlers operating off northern Australia . Smaller numbers are also captured in gillnets and on longlines . As this species has a relatively high reproductive rate and losses to fisheries are not severe enough to affect its population , it has been assessed as Least Concern by the International Union for Conservation of Nature (IUCN) .