

## = Peppered maskray =

The peppered maskray or speckled maskray ( *Neotrygon picta* ) is a species of stingray in the family Dasyatidae , found in shallow waters off northeastern Australia . This small , thin @-@ bodied ray attains a maximum width of 32 cm ( 13 in ) . It has a diamond @-@ shaped pectoral fin disc with a row of tiny thorns along the midline , and a relatively short , whip @-@ like tail with both upper and lower fin folds . Its upper surface has a speckled color pattern consisting of black spots and brownish reticulations on a light yellow to brown background .

Favoring soft @-@ bottomed habitats , the peppered maskray is a bottom @-@ dwelling predator consuming mainly crustaceans ( particularly caridean shrimp ) and polychaete worms . It is viviparous , with litter sizes of one to three . The females supply their developing young with histotroph ( " uterine milk " ) during gestation . Although the peppered maskray is a frequent bycatch of bottom trawl fisheries , it is still common and significant portions of its population appear to lie within unfished waters . As a result , the International Union for Conservation of Nature ( IUCN ) has assessed it as Least Concern .

## = Taxonomy and phylogeny =

Once thought to be a color morph of the painted maskray ( *N. leylandi* ) , the peppered maskray was recognized as a distinct species based on molecular data collected for the Barcode of Life project . It was described by Peter Last and William White in a 2008 Commonwealth Scientific and Industrial Research Organisation ( CSIRO ) publication . Their account was based on 13 specimens ; of these , a female 24 cm ( 9 @.@ 4 in ) across caught off Rockhampton , Queensland was designated as the holotype . The specific epithet *picta* is derived from the Latin *pictus* ( " painted " or " colored " ) . Phylogenetic analysis using mitochondrial and nuclear DNA has found that the peppered and painted maskrays are sister species . The two are estimated to have diverged c . 10 Ma , during the Miocene .

## = Description =

The peppered maskray has a thin , diamond @-@ shaped pectoral fin disc roughly 1 @.@ 2 times wider than long , with slightly concave leading margins and narrowly rounded outer corners . The snout forms an obtuse angle and has a pointed tip . The small , closely spaced eyes are followed by crescent @-@ shaped spiracles . The nostrils are elongated and have a skirt @-@ shaped curtain of skin between them ; the posterior margin of the curtain is fringed and forms two lobes . The small mouth is surrounded by papillae and bears prominent furrows at the corners . There are two papillae on the floor of the mouth . The teeth number 33 ? 38 rows in the upper jaw and 31 ? 40 rows in the lower ; the teeth are small and vary from pointed to blunt . The five pairs of gill slits are S @-@ shaped . The pelvic fins are medium @-@ sized and triangular with angular corners .

The whip @-@ like tail measures 1 @.@ 0 ? 1 @.@ 3 times as long as the disc and bears slender stinging spines on the upper surface ; smaller rays usually have one sting , larger rays two . The tail is moderately broad and flattened at the base , becoming very thin behind the sting . Both upper and lower fin folds are present past the sting , with the upper fold shorter than the lower . There are up to 22 small , closely spaced thorns along the midline of the back behind the spiracles ; otherwise , the skin is mostly smooth . This species is light yellow to brown above , with a darker reticulated pattern that may vary from faint to obvious , all overlaid by numerous black spots . Like other *Neotrygon* species , there is a dark marking across the eyes that resembles a mask . The tail has a pattern of saddles or bands behind the sting ; the tip is white and the ventral fin fold darkens to almost black posteriorly . The underside is plain white . This species reaches 32 cm ( 13 in ) across .

## = Distribution and habitat =

The range of the peppered maskray extends along the coast of northeastern Australia , from at

least the Wessel Islands off Northern Territory to Hervey Bay in Queensland ; the western boundary of its range is uncertain . It may also be found off New Guinea , though this is unconfirmed . This species is extremely common in some areas , such as the Gulf of Carpentaria . A benthic fish , it is usually found on the inner continental shelf in water less than 25 m ( 82 ft ) deep , but may occur down to 100 m ( 330 ft ) . It favors habitats with sandy or other fine substrate .

#### = = Biology and ecology = =

The peppered maskray prefers to pick prey from the surface of the substrate , as opposed to digging for them . Caridean shrimp are by far the most important food source . It also consumes polychaete worms and amphipods , and rarely penaeid prawns , molluscs , and small bony fishes . Compared to smaller rays , larger rays have a more varied diet that incorporates a greater proportion of polychaete worms .

Reproduction in the peppered maskray is viviparous ; like other stingrays , the developing embryos are initially nourished by yolk and later by histotroph ( " uterine milk " ) provided by the mother . Mature females have a single functional ovary and uterus , on the left side . Females give birth to litters of one to three pups , probably once per year . The newborns are 9 ? 11 cm ( 3 @. @ 5 ? 4 @. @ 3 in ) across . Males and females reach sexual maturity at around 17 and 18 cm ( 6 @. @ 7 and 7 @. @ 1 in ) across respectively . The maximum lifespan is at least 11 years for males and 18 years for females .

#### = = Human interactions = =

The peppered maskray lacks economic value and is discarded by fisheries . It is often caught incidentally in bottom trawls , and due to its small size does not benefit from Turtle Exclusion Devices . In particular , this species accounts for approximately 4 @. @ 5 % of the total catch of the Northern Prawn Fishery ( NPF ) in the Gulf of Carpentaria . Over half of the rays caught by the NPF , including almost all the males , are fatally crushed within the trawl . Despite this mortality , the NPF is not believed to have negatively affected the local population because its operational area does not include the waters where this species is most abundant . The peppered maskray is also caught frequently in scallop trawls operated by the Queensland East Coast Trawl Fishery . Elsewhere in its range , fishing pressure is relatively light due to external factors such as fuel prices . The International Union for Conservation of Nature ( IUCN ) has listed this species under Least Concern , because it remains common and its range includes several Marine Protected Areas .