

Mosaic Skate, *Pavoraja mosaica*

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| Report Card assessment | Sustainable | | |
| IUCN Red List Australian Assessment | Least Concern (Endemic to Australia) | IUCN Red List Global Assessment | Least Concern |
| Global Assessors | Rigby, C. | | |
| Australian Assessors | Kyne, P.M., Heupel, M.R., White, W.T., Simpfendorfer, C.A. (Shark Action Plan) & Rigby, C.L. | | |
| Report Card Remarks | Fishing pressure low across its known range and Coral Sea Marine Park provides significant protection. | | |

Summary

The Mosaic Skate is a small deepwater species endemic to tropical northeast Australia. It is only known from a limited number of specimens and has a relatively restricted range though it may occur more widely, as there have been few surveys and relatively limited fishing effort across its range. It was mostly collected from research surveys in the mid-1980s. A few were taken as bycatch in commercial trawls in the Coral Sea Fishery (CSF) however, that fishery has had

historically low effort and trawling is no longer permitted. The species may be captured in the Line Sector of the CSF, although it also has low effort and with no commercial value, the Mosaic Skate is likely released if caught; the CSF has chondrichthyan handling practices to maximise post-release survival. The species would also receive significant protection from the Coral Sea Marine Park. It may interact infrequently with Queensland managed fisheries, though it has not been reported from those fisheries that mostly operate further south than the southern limit of its known range. Although poorly-known, fishing effort is very low across its range where there is also significant spatial refuge. Therefore, the Mosaic Skate is assessed as Least Concern (IUCN) (Kyne et al. 2021) and Sustainable (SAFS).



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Distribution

The Mosaic Skate is endemic to tropical waters off northeast Australia (Last et al. 2016). It has a relatively restricted known range from Ingham to Yeppoon (Queensland) (Last and Stevens 2009). It may have a wider range of occurrence given that there have been few surveys and relatively limited fishing effort across its range (Last et al. 2008).

Stock structure and status

The Mosaic Skate is known only from a limited number of specimens and there is currently no information on population size, structure, or trend for the species.

Fisheries

The Mosaic Skate has been mostly collected from research surveys (Last et al. 2014) with a few taken as bycatch in the mid-1980s from the Trawl Sector of the Commonwealth Coral Sea Fishery (CSF). Trawl fishery effort has historically been low with most of the effort outside the known range of the species, and since 2006–2007 there has been virtually no trawl activity and as of 2018–2019, trawling is no longer permitted (Patterson et al. 2022). The species may be caught in the Line Sector of the CSF, though this sector has limited effort with only 1–2 vessels active in recent years (Patterson et al. 2022). The species is likely released if caught as it has no commercial value and the CSF has implemented chondrichthyan handling practices to maximise post-release survival (AFMA 2010). It has also received significant protection since 2014 with the implementation of the Coral Sea Marine Park, which includes zoning and gear restrictions (Patterson et al. 2022, Parks Australia 2023). The species may interact with Queensland managed fisheries yet this is unlikely to be frequent. The deepwater eastern king prawn sector of the East Coast Trawl Fishery has not recorded this species and the Deepwater Fin Fish Fishery uses benthopelagic rather than demersal gear and has very limited effort. Additionally, both fisheries mostly operate further south than the southern limit of the Mosaic Skate’s known range (DEEDI 2010, Pears et al. 2012, DAF 2019).

Habitat and biology

The Mosaic Skate is demersal on the upper continental slope and has been recorded from depths of 300–492 m (Last et al. 2014, Last et al. 2016). Maximum size is at least 28 cm total length (TL) and approximately 16 cm disc width (DW) with the smallest observed mature male 27 cm TL (Last and Stevens 2009). Little else is known of its biology.

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| Longevity and maximum size | Longevity: unknown Max size: at least 28 cm TL |
| Age and/or size at maturity (50%) | Males: smallest observed mature 27 cm TL Females: unknown |

CAAB Code: 37 031024

Link to IUCN Page: <https://www.iucnredlist.org/species/195472/68640455>

Link to page at Shark References: <https://shark-references.com/species/view/Pavoraja-mosaica>

References

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