

Marbled Ghostshark, *Hydrolagus marmoratus*

Report Card assessment	Sustainable		
IUCN Red List Australian Assessment	Endemic to Australia	IUCN Red List Global Assessment	Least Concern
Global Assessors	Theiss, S.M., Huveneers, C. & Ebert, D.A.		
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 and significant refuge across its range.		

Summary

The Marbled Ghostshark is a medium-sized and rare deepwater chimaerid endemic to eastern Australia in tropical to subtropical waters. It may be caught in the Commonwealth Coral Sea (CSF) line fishery, though effort is limited and trawling is now prohibited in the CSF. It was a minor incidental catch in the Commonwealth Southern and Eastern Scalefish and Shark Fishery (SESSF)



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from 2000–2006 and though the closure below 700 m depth since 2007 would provide some refuge, it may still be caught in that fishery. It was assessed as at low risk from the SESSF and the species would receive refuge in the marine park network. Overall, fishing effort is very low across its northern range and the species is at low risk in its southern range. Therefore, the Marbled Ghostshark is assessed as Least Concern (IUCN) (Kyne et al. 2021) and Sustainable (SAFS).

Distribution

The Marbled Ghostshark is endemic to tropical and subtropical eastern Australia where it occurs in a wide range from the Whitsunday Group (Queensland) to Bulli (New South Wales) (Last and Stevens 2009).

Stock structure and status

There is currently no information on population size, structure or trend for the species; though it is considered rare (Kyne et al. 2021).

Fisheries

The Marbled Ghostshark is an incidental catch of trawl and possibly line fisheries. It may interact with the Commonwealth Coral Sea Fishery (CSF), though trawl effort has historically been low and since 2006–2007, there has been virtually no trawl activity and as of 2018–2019, trawling was 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). It was a minor incidental catch of the Commonwealth Southern and Eastern Scalefish and Shark Fishery (SESSF) with approximately 68 kg caught annually from 2000–2006, all of which was released (Walker and Gason 2007). Fishing below 700 m in the SESSF was prohibited in 2007 (Patterson et al. 2022), and while this provides refuge at depth, catches in shallower waters may occur. It was assessed as at low risk in the SESSF (Sporcic et al. 2021). It would also receive refuge in the Commonwealth Coral Sea Marine Park and South-east Marine Parks Network (Parks Australia 2023).

Habitat and biology

The Marbled Ghostshark is demersal on the continental slope at depths of 550–995 m (Didier 2008). Maximum size is at least 80 cm total length (TL), 53 cm pre-caudal filament length (PCFL), and 40 cm body length (BDL) (Didier 2008, Theiss et al. 2015, Kyne et al. 2021). Nothing else is known of its biology.

Longevity and maximum size	Longevity: unknown Max size: at least 80 cm TL, 53 cm PCFL, 40 cm BDL
Age and/or size at maturity (50%)	Both sexes: unknown

CAAB Code: 37 042011

Link to IUCN Page: <http://www.iucnredlist.org/details/39339/0>

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

References

- Didier, D.A. 2008. Two new species of the genus *Hydrolagus* Gill (Holocephali: Chimaeridae) from Australia. pp 349–356. In: P.R. Last, W.T. White and J.J. Pogonoski (eds), *Descriptions of new Australian Chondrichthyans*, pp. 349–356. CSIRO Marine and Atmospheric Research Paper No. 022.
- Kyne, P.M., Heupel, M.R., White, W.T. and Simpfendorfer, C.A. 2021. *The Action Plan for Australian Sharks and Rays 2021*. National Environmental Science Program, Marine Biodiversity Hub, Hobart.
- Last, P.R. and Stevens, J.D. 2009. *Sharks and Rays of Australia*. Second Edition. CSIRO Publishing, Collingwood, Australia.
- Parks Australia 2023. Australian Marine Parks. <https://parksaustralia.gov.au/marine/parks/>
- Patterson, H., Bromhead, D., Galeano, D., Larcombe, J., Timmiss, T., Woodhams, J. and Curtotti, R. 2022. *Fishery status reports 2022*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.
- Sporcic, M., Bulman, C.M. and Fuller, M. 2021. *Ecological Risk Assessment for the Effects of Fishing. Report for Southern and Eastern Scalefish and Shark Fishery (Commonwealth Trawl Sector): Otter trawl Sub-fishery 2012-2016*. Report for the Australian Fisheries Management Authority. 277 p.
- Theiss, S.M., Huvneers, C. and Ebert, D.A. 2015. *Hydrolagus marmoratus*. *The IUCN Red List of Threatened Species 2015*: e.T195434A68629874.
- Walker, T. I., and Gason, A. S. 2007. *Shark and other chondrichthyan byproduct and bycatch estimation in the Southern and Eastern Scalefish and Shark Fishery*. Final report to Fisheries Research and Development Corporation Project No. 2001/007. Primary Industries Research Victoria: Queenscliff, Victoria, Australia.