

Ghost Skate, *Notoraja hirticauda*

Report Card assessment	Sustainable		
IUCN Red List Australian Assessment	Least Concern* (Endemic to Australia)	IUCN Red List Global Assessment	Data Deficient
Global Assessors	Huveneers, C. & Last, P.R.		
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.		

*The Australian assessment status is more recent than the Global assessment and the shift from DD to LC aligns with a less evidentiary and more precautionary approach to Red List assessments rather than any new available information.

Summary

The Ghost Skate is a small deepwater species endemic to tropical and subtropical waters of Western Australia in a relatively restricted area from Monte Bello Islands to Shark Bay. It is only known from a limited number of specimens. It may be caught incidentally in the Commonwealth Northwest Slope Trawl Fishery and Western Deepwater Trawl Fishery, though being of little commercial value it is likely released; post-release mortality is unknown.



Chondrichthyans have been assessed as at low risk in these fisheries. The species would receive some refuge at depth and in the Commonwealth North-west Marine Parks Network. Fishing effort is very low across its range where there is also significant spatial and some depth refuge. Therefore, the Ghost Skate is assessed as Least Concern (IUCN) (Kyne et al. 2021) and Sustainable (SAFS).

Distribution

The Ghost Skate is endemic to Western Australia where it occurs in tropical and subtropical waters in a relatively restricted range from the Monte Bello Islands to Shark Bay (Last and Stevens 2009, Last et al. 2016).

Stock structure and status

The Ghost 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 (Huveneers and Last 2015).

Fisheries

The Ghost Skate is possibly caught incidentally by deepwater trawl fisheries, that is, the Commonwealth Northwest Slope Trawl Fishery (targets prawns and scampi at 200–600 m depths) and

the Western Deepwater Trawl Fishery (targets finfish and bugs (*Ibacus* spp.) at 200–700 m depths). As it is of little commercial value, the Ghost Skate is likely released and there is no information on post-release mortality. However, both fisheries have limited effort with only 1–6 active vessels and the species would receive some refuge at depth beyond the maximum depth of the fisheries (Patterson et al. 2022). Chondrichthyans have been assessed as at low risk in these fisheries (Zhou et al. 2009). It would also receive refuge in the Commonwealth North-west Marine Parks Network that came into effect in 2018 which include zoning and gear restrictions (Parks Australia 2023).

Habitat and biology

The Ghost Skate is demersal on the continental slope at depths of 500–760 m (Last et al. 2016). Maximum size is at least 45 cm total length (TL) and males are mature by 36 cm TL (Last and McEachran 2006). Nothing else is known of its biology.

Longevity and maximum size	Longevity: unknown Max size: at least 45 cm TL
Age and/or size at maturity (50%)	Males: 36 cm TL Females: unknown

CAAB Code: 37 031015

Link to IUCN Page: <https://www.iucnredlist.org/species/161647/68637248>

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

References

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- Last, P.R. and McEachran, J.D. 2006. *Notoraja hirticauda*, a new species of skate (Chondrichthyes: Rajoidei) from the south-eastern Indian Ocean. *Memoirs of Museum Victoria* 63(1): 65–75.
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- Last, P., White, W., Carvalho, M.R. de, Séret, B., Stehmann, M. and Naylor, G.J.P. 2016. *Rays of the World*. CSIRO Publishing, Clayton, Victoria, Australia.
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