

Smallspine Spookfish, *Harriotta haeckeli*

Report Card assessment	Sustainable		
IUCN Red List Australian Assessment	Least Concern	IUCN Red List Global Assessment	Least Concern
Global Assessors	Dagit, D.D. & Walls, R.H.L.		
Australian Assessors	Kyne, P.M., Heupel, M.R., White, W.T., Simpfendorfer, C.A. (Shark Action Plan) & Rigby, C.L.		
Report Card Remarks	Deepwater species not currently fished in Australia.		

Summary

The Smallspine Spookfish is a medium-sized and poorly-known rare deepwater chimaerid that occurs in tropical to temperate waters in the North Atlantic, southern Indian, and Southwest Pacific Oceans. It is caught incidentally in New Zealand deepwater trawl fisheries. In Australia, it occurs in a restricted range off Victoria and Tasmania at depths of 1,480–1,950 m and is beyond the depth of any commercial fisheries. It has not been reported from the Commonwealth Southern and Eastern Scalefish and Shark Fishery, even prior to the closure of trawling in waters deeper than 700 m. The population is suspected to be stable in Australia as there is no fishing effort in its known range. Elsewhere where it is caught, it has significant refuge at depth. Therefore, the Smallspine Spookfish is assessed as globally and in Australia as Least Concern (IUCN) (Kyne et al. 2021), and in Australia as Sustainable (SAFS).



Distribution

The Smallspine Spookfish has a patchy distribution and is currently known from tropical to temperate waters in the North Atlantic, southern Indian and Southwest Pacific Oceans (Dagit and Walls 2015). In Australia, it is known from a relatively restricted range in the southeast, that is, off Cape Everard (Victoria) and off Flinders Island and Low Rocky Point (Tasmania) (Last and Stevens 2009). It may occur more widely given that there have been few surveys across its spatial and depth range (Kyne et al. 2021).

Stock structure and status

There is currently no information on population size, structure or trend for the species as catch records are rare (Dagit and Walls 2015). *Harriotta* species are currently being examined to resolve taxonomic uncertainties.

Fisheries

The Smallspine Spookfish is caught incidentally by deepwater trawls off New Zealand (Dagit and Walls 2015). In Australia, it's range is beyond the depths of any commercial fisheries. It has not been previously reported from the Commonwealth Southern and Eastern Scalefish and Shark Fishery, even prior to the closure of trawling in waters deeper than 700 m in 2007 (Patterson et al. 2022). The species vulnerability to fishing and climate change was assessed as low (Walker et al. 2021).

Habitat and biology

The Smallspine Spookfish is demersal on the continental slope at depths of 1,114–2,603 m, though in Australia it is reported from 1,480–1,950 (Last and Stevens 2009, Weigmann 2016). Maximum size is 74 cm total length (TL) and 65 cm pre-caudal filament length (PCFL) (Weigmann 2016, Kyne et al. 2021). Males mature at approximately 45 cm TL and females at approximately 60 cm TL (Dagit and Walls 2015). Nothing else is known of its biology.

Longevity and maximum size	Longevity: unknown Max size: 74 cm TL, 65 cm PCFL
Age and/or size at maturity (50%)	Males: ~45 cm TL Females: ~60 cm TL

CAAB Code: 37 044003

Link to IUCN Page: <https://www.iucnredlist.org/species/60144/70709829>

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

References

- Dagit, D.D. and Walls, R.H.L. 2015. *Harriotta haeckeli*. *The IUCN Red List of Threatened Species* 2015: e.T60139A70709321
- 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.
- 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.
- Walker, T.I., Day, R.W., Awruch, C.A., Bell, J.D., Braccini, J.M., Dapp, D.R., Finotto, L., Frick, L.H., Garcés-García, K.C., Guida, L., Huvneers, C., Martins, C.L., Rochowski, B.E.A., Tovar-Ávila, J., Trinnie, F.I. and Reina, R.D. 2021. Ecological vulnerability of the chondrichthyan fauna of southern Australia to the stressors of climate change, fishing and other anthropogenic hazards. *Fish and Fisheries* 22(5), 1105–1135.
- Weigmann, S. 2016. Annotated checklist of the living sharks, batoids and chimaeras (Chondrichthyes) of the world, with a focus on biogeographical diversity. *Journal of Fish Biology* 88(3): 837–1037.