

## Paddlenose Spookfish, *Rhinochimaera africana*

Report Card assessment	Sustainable		
IUCN Red List Australian Assessment	Least Concern	IUCN Red List Global Assessment	Data Deficient
Global Assessors	Dagit, D.D.		
Australian Assessors	Kyne, P.M., Heupel, M.R., White, W.T., Simpfendorfer, C.A. (Shark Action Plan) & Rigby, C.L.		
Report Card Remarks	Australian fishing pressure low and significant refuge across its Australian range.		

### Summary

The Paddlenose Spookfish is a large and poorly-known rare deepwater chimaerid with a patchy tropical to temperate range in the Indo-West Pacific. In Australia, it has a



relatively restricted range, only occurring in Western Australia (WA) from Dampier to Shark Bay, though it may occur more widely as there have been few surveys and relatively limited fishing effort across its WA range. It is taken incidentally in deepwater trawl fisheries, and retained in at least Taiwan, though little is known about catch trends in Taiwan or elsewhere. In Australia, it may be caught in the Commonwealth Northwest Slope Trawl Fishery and Western Deepwater Trawl Fishery and likely released as it is of little commercial value; post-release mortality is unknown. However, both fisheries have limited effort and the species would receive significant refuge at depth as occurs beyond the maximum depth fished. Chondrichthyans have been assessed as at low risk in these fisheries. The species would also receive refuge in the Commonwealth North-west Marine Parks Network. Overall, in Australia, fishing effort is very low across its range where there is also significant spatial and depth refuge. Therefore, the Paddlenose Spookfish is assessed globally as Data Deficient and in Australia as Least Concern (IUCN) (Kyne et al. 2021) and Sustainable (SAFS).

### Distribution

The Paddlenose Spookfish occurs patchily in tropical to temperate waters of the Indo-West Pacific from South Africa to Japan (Dagit 2016). In Australia, it has a relatively restricted distribution occurring only in Western Australia from approximately Dampier to Shark Bay, though it may occur more widely given that there have been few surveys and relatively limited fishing effort 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, though it is considered rare (Dagit 2016, Kyne et al. 2021).

### Fisheries

The Paddlenose Spookfish is caught incidentally by deepwater trawl fisheries and retained, in at least Taiwan (Dagit 2016). In Australia, it may be caught in 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) (Patterson et al. 2022). As it is of little commercial value, the Paddlenose Spookfish is likely discarded and there is no information on post-release mortality. However, both fisheries have limited effort with only 1–6 active vessels (Patterson et al. 2022), and the species would receive significant refuge at depth as it occurs deeper than the current maximum depths fished. 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 Paddlenose Spookfish is demersal on the continental slope at depths of 430–1,450 m (Weigmann 2016). Maximum size is 112 cm pre-caudal filament length (PCFL), approximately 150 cm total length (TL), and 65 cm body length (BDL) (Dagit 2016, Kyne et al. 2021). Males mature at approximately 40–cm BDL and females at approximately 50 cm BDL (Dagit 2016).

Longevity and maximum size	Longevity: unknown Max size: 112 cm PCFL, 150 cm TL, 65 cm BDL,
Age and/or size at maturity (50%)	Males: approximately 40–50 cm BDL Females: approximately 50 cm BDL

**CAAB Code:** 37 044004

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

**Link to page at Shark References:** <https://shark-references.com/species/view/Rhinochimaera-africana>

### References

- Dagit, D.D. 2016. *Rhinochimaera africana*. *The IUCN Red List of Threatened Species* 2016: e.T60144A70709829.
- 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.
- Parks Australia 2023. North-west Marine Parks Network. <https://parksaustralia.gov.au/marine/parks/north-west/>.
- 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.
- 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.
- Zhou, S., Fuller, M. and Smith, T. 2009. *Rapid quantitative risk assessment for fish species in additional seven Commonwealth fisheries*. Marine and Atmospheric Research, CSIRO, Cleveland, Australia.