

Longspine Chimaera, *Chimaera macrospina*

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	Deepwater species with no current fishing effort in its preferred depth range and limited effort and significant refuge in shallower waters.		

Summary

The Longspine Chimaera is a medium-sized deepwater chimaerid endemic to tropical and temperate waters in a wide and disjunct range off the east and west coasts. It is a possible incidental catch of trawl and line fisheries, and may be taken in the Commonwealth Coral Sea Fishery, the Northwest Slope Trawl Fishery, and the Western Deepwater Trawl Fishery. It has not been reported from the Southern and Eastern Scalefish and Shark Fishery. However,

its preferred depth range is deeper than these fisheries which all have limited effort, and it would receive significant refuge in the network of marine parks. The population is suspected to be stable as there is no fishing effort in its preferred depth range and limited effort in its shallower depth range. Therefore, the Longspine Chimaera is assessed as Least Concern (IUCN) (Kyne et al. 2021) and Sustainable (SAFS).



Distribution

The Longspine Chimaera is endemic to Australia in tropical to temperate waters (Last and Stevens 2009). It has a wide and disjunct range occurring from the Queensland Plateau (Queensland) to Brush Island (New South Wales) in the east and from North West Cape to Cape Naturaliste (Western Australia) in the west (Last and Stevens 2009).

Stock structure and status

There is currently no information on population size, structure or trend for the species.

Fisheries

The Longspine Chimaera is a possible incidental catch of trawl and 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 has not been reported from the Commonwealth Southern and Eastern Scalefish Fishery (SESSF) and was not included in a risk assessment of the fishery. Further, fishing deeper than 700 m has been prohibited in the SESSF since 2007, which would provide the species refuge at depth as it mostly occurs deeper than 800 m. It may be caught in the Commonwealth Northwest Slope Trawl Fishery and the Western Deepwater Trawl Fishery which operate at depths of 200–600 m and 200–700 m, respectively. However, both fisheries have limited effort with only 1–6 active vessels (Patterson et al. 2022) and the species would receive refuge at depth as it mostly 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 Marine Parks Networks on the east and west coasts (Parks Australia 2023).

Habitat and biology

The Longspine Chimaera is demersal on the continental slope at depths of 435–1,300 m but mostly deeper than 800 m (Last and Stevens 2009, Theiss et al. 2015). Maximum size is at least 75 cm total length (TL) and 53 cm body length (BDL) (Theiss et al. 2015). Nothing else is known of its biology.

Longevity and maximum size	Longevity: unknown Max size: 75 cm TL, 53 cm BDL
Age and/or size at maturity (50%)	Both sexes: unknown

CAAB Code: 37 042006

Link to IUCN Page: <https://www.iucnredlist.org/species/195432/124541630>

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

References

- 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.
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- 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.
- Theiss, S.M., Huveneers, C. and Ebert, D.A. 2015. *Chimaera macrospina*. *The IUCN Red List of Threatened Species* 2015: e.T195430A68617345.
- 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.