

Largespine Velvet Dogfish, *Scymnodon macracanthus*

Report Card assessment	Sustainable		
IUCN Red List Australian Assessment	Near Threatened	IUCN Red List Global Assessment	Vulnerable
Assessors	Finucci, B. & Kyne, P.M.		
Australian Assessors	Kyne, P.M., Heupel, M.R., White, W.T. & Simpfendorfer, C.A. (Shark Action Plan)		
Report Card Remarks	Uncommon species; likely low productivity and range overlaps with deepwater teleost fisheries though no evidence of decline in Australia		

Summary

The Largespine Velvet Dogfish is a relatively uncommon deepwater shark that occurs across the South Pacific. It may extend deeper than is currently recognised. The species is captured as bycatch in small but erratic quantities in some deepwater line and trawl fisheries, although presumably from only part of its known range. The aggregating behaviour of the species make it susceptible to capture. The Largespine Velvet Dogfish appears to be of low productivity and declines in the area of the South Eastern Scalefish and Shark Fishery are inferred from other similar taxa. However, these possible declines would only have occurred across parts of its range, and so overall the declines are thought to be limited at the population level. Therefore, the species is assessed as Near Threatened (IUCN) (Kyne et al. 2021) and in Australia, Sustainable (SAFS).



The Largespine Velvet Dogfish occurs in the western South Pacific, including Australia, New Zealand and some ridges of the southern Indian Ocean. In Australia, it is known from Port Macquarie (New South Wales) to Portland (Victoria), including Tasmania, the Norfolk Ridge and nearby seamounts (Last and Stevens 2009).

Distribution

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Stock structure and status

There is currently no information on population size, structure, or trend for the species. Declines are of the species are inferred to have occurred in the area of the South Eastern Scalefish and Shark Fishery as other similar species have shown significant declines (Graham et al. 2001). However, these declines only occurred in part of the species' range.

Fisheries

The Largespine Velvet Dogfish is a minor bycatch in some deepwater line and trawl fisheries and its aggregating behaviour makes it susceptible to localised depletion. There is some concern that

because its geographic and depth range coincide with that for some important teleost fisheries its relatively low (apparent) population will continue to decline with continuing or expanding fisheries.

Habitat and biology

The Largespine Velvet Dogfish is demersal on the upper and middle continental slope at 200–1,500 m, usually 500–1,000 m. Maximum size is 170 cm total length (TL) with males mature at 100–120 cm TL and females at 130–145 cm TL. The species has up to 36 pups per litter. Little else is known of its biology (Last and Stevens 2009).

Longevity and maximum size	Longevity: unknown Max size: 170 cm TL
Age and/or size at maturity (50%)	Males: 100–120 cm TL Females: 130–145 cm TL

CAAB Code: 37 020013

Link to IUCN Page: <http://www.iucnredlist.org/details/46865/0>

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

References

Graham, K.J., Andrew, N.L. and Hodgson, K.E. 2001. Changes in the relative abundances of sharks and rays on Australian South East Fishery trawl grounds after twenty years of fishing. *Marine and Freshwater Research* 52: 549–561.

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.