Broad Cowtail Ray, *Pastinachus ater*

Report Card assessment	**Sustainable**		
IUCN Red List Australian Assessment	Least Concern	IUCN Red List Global Assessment	Vulnerable
Global Assessors	Sherman, C.S., Bin Ali, A., Bineesh, K.K., Derrick, D., Dharmadi, Fahmi, Fernando, D., Grant, I, Haque, A.B., Maung, A., Seyha, L., Tanay, D., Utzurrum, J.A.T., Vo, V.Q. & Yuneni, R.R.		
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, BRDs significantly reducing catch, marine parks provide refuge.		

Summary

The Broad Cowtail Ray is a large continental shelf ray distributed across tropical and subtropical waters of northern Australia and across the Indo-Pacific. It is caught incidentally and retained for its meat in at least Southeast Asia where significant population declines have occurred due to mostly unregulated fishing pressure. In Australia, it is caught incidentally in mostly trawl fisheries and likely released as most of these prohibit elasmobranch retention; post-release mortality is unknown. Additionally, many of the trawl fisheries mandate the use of bycatch Reduction Devices (BRDs) which have been shown to reduce the catch of this species by 97%. Many parts of the species' range across northern Australia have low fishing effort that is managed and it receives significant refuge in the extensive network of marine parks. The Broad Cowtail Ray is assessed as globally Vulnerable (IUCN) and in Australia, as Least Concern (IUCN) (Kyne et al. 2021) and Sustainable (SAFS).


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Distribution

The Broad Cowtail Ray occurs in tropical and subtropical waters of northern Australia and across the Indo-Pacific from New Caledonia to Madagascar (Last et al. 2016). In Australia, it has a wide range from Clarence River (New South Wales) to Shark Bay (Western Australia) (Last and Stevens 2009).

Stock structure and status

The population is inferred to have declined significantly across Southeast Asia and the Arabian Seas due to high levels of mostly unregulated exploitation, whereas in Australia, it is considered common, fishing pressure is limited and managed, and the population is suspected to be stable (Kyne et al. 2021, Sherman et al. 2021).

Fisheries

The Broad Cowtail Ray is taken incidentally across the Indo-Pacific in a wide variety of fishing gears (except in Australia) and is retained for its meat and skin (Sherman et al. 2021). In Australia, it is caught in the Commonwealth Northern Prawn Fishery (NPF) and in the Queensland East Coast Trawl Fishery (ECTF), and possibly the Gulf of Carpentaria (GoC) Developmental Fishery and Inshore Fishery (Jacobsen et al. 2019a, b). It may be caught in the New South Wales Estuary Prawn Trawl fishery in the Clarence River where stingrays (Dasyatidae spp). have been reported as taken (NSW Fisheries 2002). It is also possibly caught in the Northern Territory Demersal Fishery (DF) and Western Australian prawn fisheries and Pilbara Fish Trawl Fishery. Bycatch reduction devices (BRDs) have been mandated in most of these fisheries since the early-mid 2000s and reduce the catch of the Broad Cowtail Ray by 97%, though they may not be as effective at excluding juveniles (Griffiths et al. 2006, Gaughan and Santoro 2021). If it is caught, it would be released as elasmobranch retention is now prohibited, except in the Queensland GoC Inshore Fishery, although post-release mortality is unknown. The Broad Cowtail Ray was considered at intermediate-low risk in the ECTF due to its low fecundity (Jacobsen et al. 2018) and at low risk of overfishing in the NPF due to estimated fishing mortality being below levels leading to population reduction (Zhou and Griffiths 2008). Catches in Western Australia fisheries are likely minimal as effort is limited and negligible bycatch has been reported in recent years (Gaughan and Santoro 2021). Across northern Australia, many parts of the species' range have low fishing effort and the species would receive refuge in the extensive network of marine parks (Parks Australia 2023).

Habitat and biology

The Broad Cowtail Ray is demersal on the continental and insular shelf at depths of 0–60 m but prefers inshore, shallow waters and occurs in estuarine and sometimes freshwater (Last and Stevens 2009, Weigmann 2016). Maximum size is approximately 200 cm disc width (DW), exceeding 300 cm total length and size-at-maturity and age parameters are unknown (Sherman et al. 2021). It has a litter size of 2 pups (Last et al. 2016).

Longevity and maximum size	Longevity: unknown Max size: ~200 cm DW
Age and/or size at maturity (50%)	Unknown

CAAB Code: 37 035011
Link to IUCN Page: https://www.iucnredlist.org/species/70682232/124550583
Link to page at Shark References: https://shark-references.com/species/view/Pastinachus-ater

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