

## Brown Whipray, *Maculabatis toshi*

Report Card assessment	Sustainable		
IUCN Red List Australian Assessment	Least Concern	IUCN Red List Global Assessment	Least Concern
Global Assessors	Rigby, C.L. & Pierce, S.J.		
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 is managed and low across much of its range; limited trawl fishery interactions, and marine parks provide refuge.		

### Summary

The Brown Whipray is a medium-sized continental shelf ray distributed across tropical and subtropical waters of northern Australia and southern Papua New Guinea. It occurs mostly in very shallow inshore waters. The species is caught incidentally and retained for its meat in Papua New Guinea. In Australia, it is caught incidentally in trawl and net fisheries and likely released as most of these prohibit elasmobranch retention, although 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 whiprays by >95%. It is caught in the Northern Prawn Fishery and Queensland East Coast Trawl Fishery and has been assessed as at low risk from both fisheries, likely due to the low level of interactions. Many parts of the species' range across northern Australia have low fishing effort and it receives significant refuge in the network of marine parks. The Brown Whipray is assessed as globally and in Australia as Least Concern (IUCN) (Kyne et al. 2021) and Sustainable (SAFS).



### Distribution

The Brown Whipray occurs in tropical and subtropical waters of northern Australia and southern Papua New Guinea (Last et al. 2016). In Australia, it has a wide range and occurs from the Clarence River (New South Wales) to Darwin (Northern Territory) (Last et al. 2016).

### Stock structure and status

There is currently no information on population structure or trend for the species. It is common in its preferred inshore habitat (Rigby and Pierce 2016). However, it has not been recorded from its south-eastern most Australian range since approximately the mid-2000s (Last and Stevens 2009).

### Fisheries

The Brown Whipray is taken incidentally in trawl and net fisheries. In Papua New Guinea, it is occasionally caught in coastal fisheries (but not in the trawl fishery) and may be consumed if retained (White et al. 2017). In Australia, it is caught in the Commonwealth Northern Prawn Fishery though is less common than the sympatric Blackspotted Whipray (*Maculabatis astra*) (Last et al. 2008). It is caught in the Queensland East Coast Trawl Fishery (ECTF) and possibly in the Gulf of Carpentaria (GoC) Developmental Fishery and Inshore Fishery (Jacobsen et al. 2019a, b). Bycatch reduction devices (BRDs) have been mandated in the trawl fisheries since the early-mid 2000s and reduce the catch of the whiprays by >95%, though they may not be as effective at excluding juveniles (Griffiths et al. 2006). 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. Whiprays are considered at low risk of overfishing in the NPF due to estimated fishing mortality being below levels leading to population reduction (Zhou and Griffiths 2008). The Brown Whipray is at low risk from the ECTF, likely due to minimal interactions with the trawl fishery (Campbell et al. 2018). Across northern Australia, many parts of the species' range have low fishing effort and the species would receive refuge in the network of marine parks (Parks Australia 2023). It may be impacted by localised habitat degradation in urbanised areas of southeast Australia, and its presence in northern New South Wales requires confirmation (Rigby and Pierce 2016, Kyne et al. 2021).

### Habitat and biology

The Brown Whipray is demersal on the inner continental shelf at depths of 0–41 m but mostly occurs in depths less than 10 m in intertidal sand flats, muddy substrates, and mangroves (Last et al. 2016, Rigby and Pierce 2016, White et al. 2017). Maximum size is approximately 82 cm disc width (DW) with males mature at approximately 50–53 cm DW (Last et al. 2016, Rigby and Pierce 2016). Little else is known of its biology.

Longevity and maximum size	Longevity: unknown Max size: ~82 cm DW
Age and/or size at maturity (50%)	Males: ~50–53 cm DW Females: unknown

**CAAB Code:** 37 035022

**Link to IUCN Page:** <https://www.iucnredlist.org/species/161505/104194858>

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

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