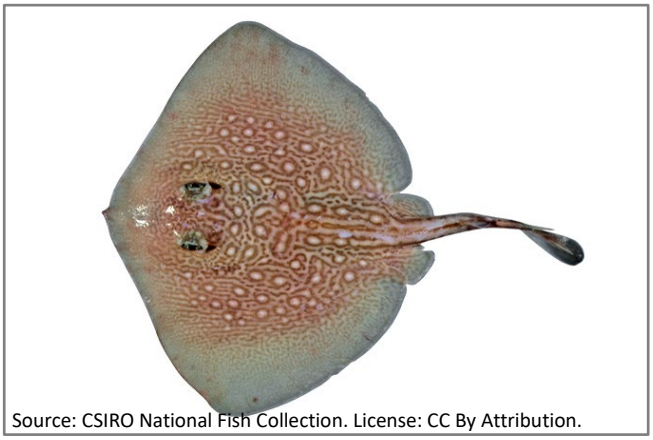
Patchwork Stingaree, *Urolophus flavomosaicus*

Report Card assessment	**Sustainable**		
IUCN Red List Australian Assessment	Least Concern (Endemic to Australia)	IUCN Red List Global Assessment	Least Concern
Global Assessors	Kyne, P.M., Last, P.R., Marshall, L.J. & Rigby, C.L.		
Australian Assessors	Kyne, P.M., Heupel, M.R., White, W.T., Simpfendorfer, C.A. (Shark Action Plan) & Rigby, C.L.		
Report Card Remarks	At risk from fishing in approximately 20% of its range, limited fishing pressure and significant refuge in rest of its range.		

Summary

The Patchwork Stingaree is a small demersal continental shelf and upper slope ray endemic to tropical and subtropical waters of Queensland and Western Australia. It is caught incidentally in trawl and possibly line fisheries and likely released as it has no commercial value and elasmobranchs are prohibited from retention in some fisheries. However, post-release mortality for trawl caught stingarees is generally high and stingarees typically abort their embryos when captured. It is taken in the deepwater eastern king prawn sector of the East Coast Trawl Fishery (ECTF) and considered at moderate-high risk from this fishery in the southern half of its Queensland range. This is due to its likely low productivity, suspected high post-release mortality, low exclusion rates from mandatory bycatch reduction devices, and a significant overlap of its southern range and trawl effort. There is limited fishing effort in the northern half of its Queensland range and refuge in the Coral Sea Marine Park. In Western Australia, chondrichthyans are at low risk in the fisheries it may interact with due to limited fishing effort and refuge in the North-west Marine Parks Network. Overall, the species is at risk in approximately 20% of its range while across the remainder of its range there is limited fishing effort and refuge in Marine Parks. Therefore, the Patchwork Stingaree is assessed as Least Concern (IUCN) (Kyne et al. 2021) and Sustainable (SAFS).



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Distribution

The Patchwork Stingaree is endemic to tropical and subtropical northern Australian waters (Last et al. 2016). It has a disjunct east and west coast range: on the east coast, it occurs from Townsville to Caloundra (Queensland) and on the west coast from Cape Leveque to Abrolhos Islands (Western Australia) (Last and Stevens 2009).

Stock structure and status

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

Fisheries

The Patchwork Stingaree is caught incidentally by trawl and possibly line fisheries. It is taken in the Queensland deepwater eastern king prawn sector of the East Coast Trawl Fishery (ECTF) in the southern half of its Queensland range. It is released as elasmobranch retention is prohibited, however, post-release mortality (PRM) for trawl caught stingarees is generally high and urolophids typically abort their embryos when caught which can reduce population viability (Rigby et al. 2016, Adams et al. 2018, Campbell et al. 2018). Although bycatch reduction devices (BRDs) have been mandatory since 2002, their effectiveness is limited at excluding medium-sized rays such as this species (Griffiths et al. 2006). The Patchwork Stingaree was assessed at medium-high risk from the southern ECTF based on a large part of its southern range being trawled (Campbell et al. 2018). It may be caught in the Line Sector of the Commonwealth managed Coral Sea Fishery (CSF), that fishes mostly at 30–800 m though the Sector has limited effort with only two vessels active in recent years. Trawling is no longer permitted in the CSF and trawl effort was historically low (Patterson et al. 2022). The lighter fishing pressure in the northern half of the species' Queensland range and the Commonwealth Coral Sea Marine Park would provide some refuge. In Western Australia, it may be incidentally caught in the Northwest Slope Trawl Fishery and the Western Deepwater Trawl Fishery that operate at 200–700 m depth. However, both fisheries have limited effort with only 1–6 active vessels and chondrichthyans have been assessed as at low risk in these fisheries (Zhou et al. 2009). The Patchwork Stingaree would also receive refuge in the Commonwealth North-west Marine Parks Network which include zoning and gear restrictions (Parks Australia 2023).

Habitat and biology

The Patchwork Stingaree is demersal on the continental shelf and upper slope at depths of 60–320 m (Last et al. 2016). Maximum size is at least 59 cm total length (TL) and the smallest mature male observed 38 cm TL (Last et al. 2016). Little else is known of its biology.

Longevity and maximum size	Longevity: unknown Max size: at least 59 cm TL
Age and/or size at maturity (50%)	Males: possibly 38 cm TL Females: unknown

CAAB Code: 37 038010

Link to IUCN Page: http://www.iucnredlist.org/details/39339/0

Link to page at Shark References: https://shark-references.com/species/view/Urolophus-flavomosaicus

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