

Blue lines indicate the area meeting the ISRA Criteria; dashed lines indicate the suggested buffer for use in the development of appropriate place-based conservation measures

## SOUTH PASSAGE ISRA

### Australia and Southeast Indian Ocean Region

#### SUMMARY

South Passage is located in Shelter Bay, western Shark Bay, Western Australia, Australia. This area sits in South Passage which serves as one of the main conduits for oceanic water exchange between the open Indian Ocean and the semi-enclosed Shark Bay. This area lies within a shallow, sheltered bay characterised by sandy substrates and scattered hard corals. Within this area there are: **threatened species** (Broad Cowtail Ray *Pastinachus ater*); **undefined aggregations** (Broad Cowtail Ray); and **distinctive attributes** (Australian Bluespotted Maskray *Neotrygon australiae*).

#### CRITERIA

**Criterion A - Vulnerability; Sub-criterion C5 - Undefined Aggregations; Sub-criterion D1 - Distinctiveness**

— AUSTRALIA —

— 0-10 metres —

— 1.36 km<sup>2</sup> —





## DESCRIPTION OF HABITAT

South Passage is located in Shelter Bay, western Shark Bay, Western Australia, Australia. This area sits in Shelter Bay within the South Passage which is a deep, narrow, high-energy channel bordered by rugged limestone cliffs and rocky shores (Sutton & Shaw 2020). It serves as one of the main conduits for oceanic water exchange between the open Indian Ocean and the semi-enclosed Shark Bay (Sutton & Shaw 2020). This area lies within a shallow bay characterised by sandy substrates and scattered hard and soft corals representing more than 30 species. Large bommies and patches of *Turbinaria* and *Pocillopora* occur throughout the bay. Scattered seagrass is also present, ranging from small *Halophila* to larger *Amphibolis* species. Within this area, the cleaning station is known by divers by 'the Cabbage Patch' and is characterised by ~60m long *Turbinaria* corals.

This area has a semi-arid climate characterised by two main seasons: warm to hot austral summers (October–March) and mild winters (April–September). The waters of the bay are warmer than adjacent oceanic waters in summer and cooler in winter (Nahas et al. 2005). Average sea surface temperatures are higher in summer (mean =  $24.6 \pm 1.0^\circ\text{C}$ ) than in winter (mean =  $20.8 \pm 1.7^\circ\text{C}$ ). This area is protected from swell but is subject to tidal currents and wind-driven surface currents.

This area overlaps with Shark Bay Marine Park (WA DBCA 2025).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 10 m based on the bathymetry of the area.

## ISRA CRITERIA

### CRITERION A – VULNERABILITY

One Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occurs in the area. This is the Vulnerable Broad Cowtail Ray (Sherman et al. 2021).

### SUB-CRITERION C5 – UNDEFINED AGGREGATIONS

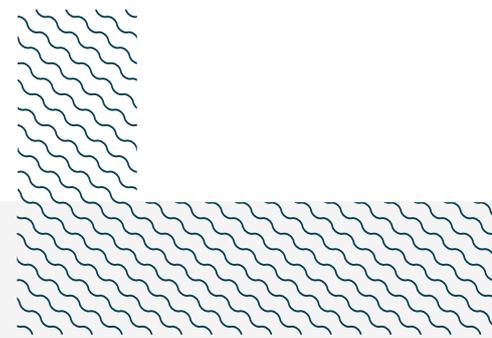
South Passage is important for undefined aggregations of one ray species.

Based on observations gathered between 2020–2025, Broad Cowtail Rays are regularly and predictably seen resting in groups in this area. Sightings have been made during seasonal visits d ~July–August when this area is snorkelled 6–7 days per week (E Gosden pers. obs. 2020–2025). There is an estimated 70% chance of encountering Broad Cowtail Rays. Sightings typically involve 1–5 animals. The individuals observed are mainly mature animals of both sexes including potentially pregnant females, based on visual observations of distended abdomens. Estimated body size range is 100–200 cm disc width (DW). Size-at-birth is ~18 cm DW, and animals reach a maximum size of 200 cm DW (Last et al. 2016). Further information is required to understand the nature and function of these aggregations.

### SUB-CRITERION D1 – DISTINCTIVENESS

South Passage is an important area for the distinct behaviour of one ray species.

Australian Bluespotted Maskray regularly visit a cleaning station within this area called 'The Cabbage Patch'. Snorkelers report this species being regularly observed being cleaned by small cleaner wrasses. Rays are seen year-round, either individually or in groups of up to five individuals. There is an estimated 70% chance of encountering Australian Bluespotted Maskrays at this cleaning station. During cleaning interactions, rays position themselves motionless with their backs curved and only the extreme of their pectoral fins are in contact with the substrate while cleaner wrasses remove parasites and dead tissue their body surfaces. This area is especially important as it is the only known cleaning station for the Australian Bluespotted Maskray.



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Emily Gosden (Shark Bay Eco Tours), Jake Mason (Shark Bay Eco Tours), and Adriana Gonzalez Pestana (IUCN SSC Shark Specialist Group - ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2025 ISRA Region 08 - Australia and Southeast Indian Ocean workshop for their contributions to this process.

We acknowledge the Traditional Owners of Country throughout Australia and recognise the continuing connection to land, waters, and culture. We pay our respects to Elders past, present, and emerging.

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## **Suggested citation**

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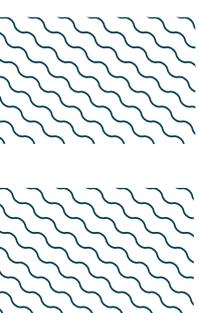
## QUALIFYING SPECIES

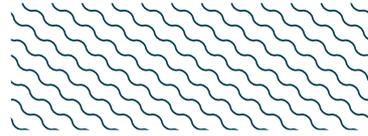
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met									
				A	B	C1	C2	C3	C4	C5	D1	D2	
RAYS													
<i>Neotrygon australiae</i>	Australian Bluespotted Maskray	NT	0-90									X	
<i>Pastinachus ater</i>	Broad Cowtail Ray	VU	0-60	X							X		

## SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
RAYS		
<i>Bathytoshia brevicaudata</i>	Smooth Stingray	LC

*IUCN Red List of Threatened Species Categories are available by searching species names at [www.iucnredlist.org](http://www.iucnredlist.org) Abbreviations refer to: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; NT, Near Threatened; LC, Least Concern; DD, Data Deficient.*





## SUPPORTING INFORMATION

There are additional indications that South Passage might be an important area for distinctive attributes of two ray species.

Snorkelers report Broad Cowtail Rays and Smooth Stingrays being cleaned by small cleaner wrasses (E Gosden pers. obs. 2020–2025). There is an estimated 30–40% and 70–80% chance of observing Broad Cowtail Ray and Smooth Stingray, respectively, being cleaned at the Cabbage Patch site, within this area (E Gosden pers. obs. 2020–2025). Additional information is needed to confirm the importance of the area for these species.



## REFERENCES

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