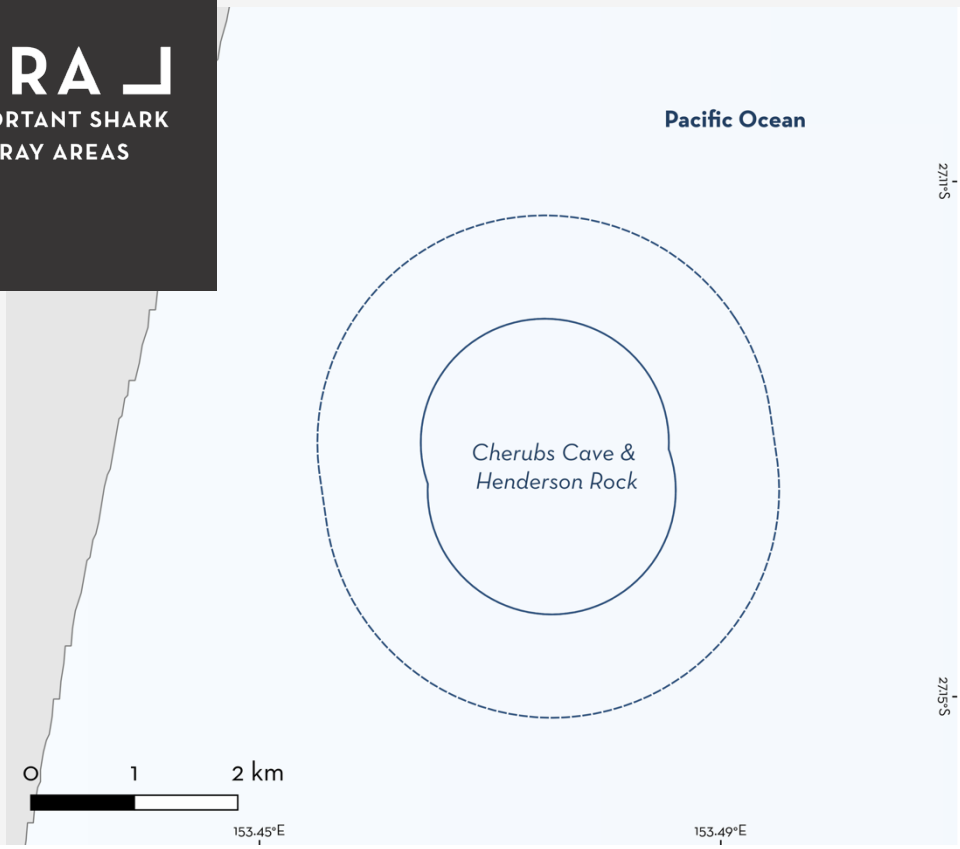
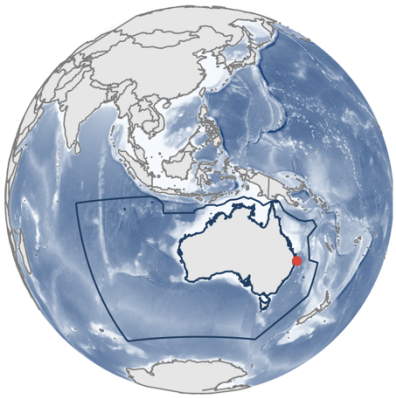
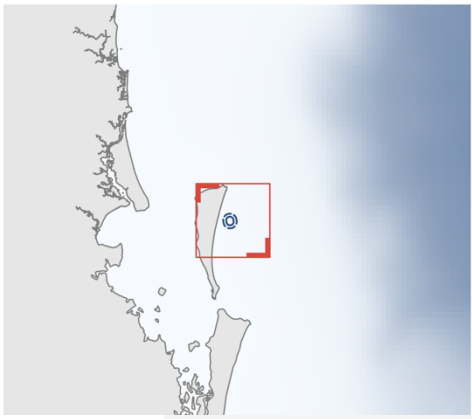
ISRA
IMPORTANT SHARK AND RAY AREAS







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

CHERUBS CAVE & HENDERSON ROCK ISRA

Australia and Southeast Indian Ocean Region

AUSTRALIA

0–25 metres

5.64 km²

SUMMARY

Cherubs Cave & Henderson Rock is located in southeast Queensland, Australia. The area is situated in offshore waters, off northeast Moreton Island. Cherubs Cave is a large, circular cave surrounded by rocky gullies, smaller caves, overhangs, and kelp beds. Henderson Rock is characterised by extensive granite outcrops with ledges, overhangs, caves, and a long deep gutter. The area overlaps with the Moreton Bay Marine Park. Within the area there are: **threatened species** and **resting areas** (Sand Tiger Shark *Carcharias taurus*).

CRITERIA

Criterion A – Vulnerability; Sub-criterion C3 – Resting Areas

DESCRIPTION OF HABITAT

Cherubs Cave & Henderson Rock is located in southeast Queensland, Australia. The area is situated in offshore waters, off northeast Moreton Island. Cherubs Cave is a large, circular cave, roughly 20 by 15 metres, with 4–6 entrances. The area is surrounded by rocky gullies, smaller caves, overhangs, and kelp beds (Unidive 2025). Henderson Rock is characterised by extensive granite outcrops. From the top of the pinnacle, which lies in about 12 m of water, the rock drops gradually at first but then more steeply to about 24 m. There are several ledges, overhangs, and caves whose entrances are often obscured by thick kelp. To the south and east of the base of the pinnacle there is a long deep gutter (Unidive 2025). The area is characterised by kelp beds on the western side and bare rock on the top with large caverns away from the pinnacle in waters to 25 m depth.

The area is influenced by its proximity to the East Australian Current, the poleward flowing western boundary current of the South Pacific Gyre (Suthers et al. 2011). The East Australian Current flow is strongest in the austral summer, and the formation of eddies along this coastline also fluctuate seasonally (Ridgway & Hill 2009).

The area overlaps with the Moreton Bay Marine Park – marine national park (green) zone (Queensland Government 2019).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 25 m depth 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 Critically Endangered Sand Tiger Shark (Rigby et al. 2025).

SUB-CRITERION C3 – RESTING AREAS

Cherubs Cave & Henderson Rock is an important resting area for one shark species.

The rocky structures located at Cherubs Cave & Henderson Rock are regularly and predictably used by resting aggregations of Sand Tiger Sharks. This area is located towards the northern extent of the species' migratory corridor, which runs from Montague Island in the south to Wolf Rock in the north (Otway & Ellis 2011; Reid-Anderson et al. 2019; Dwyer et al. 2023). Between 2003–2008, 15 Sand Tiger Sharks were tracked using pop-up archival satellite tags deployed at aggregation sites in New South Wales (Otway & Ellis 2011). Two of the tags (13.3%) released in the vicinity of Henderson Rock, highlighting this area as part of their annual migration.

Between 1991–2025, Sand Tiger Sharks were observed forming regular seasonal aggregations in the gutters, caves, and ledges of Cherubs Cave & Henderson Rock. This aggregation has been documented via photo-identification studies and acoustic telemetry confirming regular and predicable persistence of aggregations over multiple years (Bansemer & Bennett 2011; Otway & Ellis 2011; Dwyer et al. 2023). Photo-identification surveys between 2004–2008 (n = 9), revealed both males (22%) and females (78%) (including visibly pregnant individuals; 67% of total) were recorded yearly at sites within this area (Bennett & Bansemer 2011), yet direct evidence of mating in the area (e.g., fresh mating scars) or neonates are scarce (RG Dwyer pers. obs. 2025). Hovering and milling

are characteristic behaviours of resting Sand Tiger Sharks and comprise the majority of swimming behaviours observed at their main aggregation sites on Australia's east coast (Smith et al. 2015). When hovering, sharks face into the water current and their tail beats allow them to maintain a stationary position, whereas milling involves slow movements and directional changes generally confined to a particular area within a gutter (Smith et al. 2015).

Between 2015–2022, an acoustic telemetry study tracked 18 Sand Tiger Sharks (10 males, 8 females [one tagged within the area]; Dwyer et al. 2023). Seventeen of the tagged sharks were detected at the two receivers placed at Cherubs Cave & Henderson Rock (total detections = 27,801 detections). Multiple tagged sharks were detected over consecutive years (n = 2 over two years, n = 5 over three years, n = 1 over four years; Dwyer et al. 2023). Tagged female Sand Tiger Sharks were detected in the area between June to December, while males were detected between July and January. Residency analyses indicated that tagged female Sand Tiger Sharks remained at the site for an average of 11.2 days (range: 56 minutes–44 days), compared with males which averaged 2.5 days (range: 30 minutes–15 days; Dwyer et al. 2023). Both acoustic receivers were not active in the area for the whole study duration, potentially underestimating use of the area by the sharks. Between 2017–2021, when both acoustic receivers were active, there were 83 movements recorded by 12 tagged sharks between the sites of Cherubs Cave and Henderson Rock (~1.7 km distance), demonstrating the connectivity of the two main resting sites within the area. The predictable seasonal resting aggregation in the area suggest that Cherubs Cave & Henderson Rock is used by Sand Tiger Sharks as part of their annual migration (Otway & Ellis 2011; Reid-Anderson et al. 2019; Dwyer et al. 2023), either prior to the mating period (Bansemer & Bennett 2011), or for pregnant females as they move southward from Wolf Rock to pup.

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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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QUALIFYING SPECIES

Scientific Name	Common Name	IUCN Red List Category/ EPBC Act	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met								
				A	B	C1	C2	C3	C4	C5	D1	D2
SHARKS												
Carcharias taurus	Sand Tiger Shark (Grey Nurse Shark)	CR/CR*	0–232	X				X				

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Orectolobus maculatus	Spotted Wobbegong	LC

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

Australian Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) categories are available at: https://www.dcceew.gov.au/environment/epbc/our-role/approved-lists Abbreviations refer to: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; CD, Conservation Dependent.

**Status for the east coast population.*

REFERENCES

Bansemer CS, Bennett MB. 2011. Sex-and maturity-based differences in movement and migration patterns of grey nurse shark, *Carcharias taurus*, along the eastern coast of Australia. *Marine and Freshwater Research* 62: 596–606. https://doi.org/10.1071/MF10152

Dwyer RG, Rathbone M, Foote DL, Bennett M, Butcher PA, Otway NM, Louden BM, Jaine FR, Franklin CE, Kilpatrick C. 2023. Marine reserve use by a migratory coastal shark, *Carcharias taurus*. *Biological Conservation* 283: 110099. https://doi.org/10.1016/j.biocon.2023.110099

Otway NM, Ellis MT. 2011. Pop-up archival satellite tagging of *Carcharias taurus*: movements and depth/temperature-related use of south-eastern Australian waters. *Marine and Freshwater Research* 62: 607–620. https://doi.org/10.1071/MF10139

Queensland Government. 2019. Marine Parks (Moreton Bay) Zoning Plan 2019. Brisbane: Queensland Government.

Reid-Anderson S, Bilgmann K, Stow A. 2019. Effective population size of the critically endangered east Australian grey nurse shark *Carcharias taurus*. *Marine Ecology Progress Series* 610: 137–148. https://doi.org/10.3354/meps12850

Ridgway K, Hill K. 2009. The East Australian Current. In: Poloczanska, ES, Hobday AJ, Richardson AJ, eds. *A marine climate change impacts and adaptation report card for Australia 2009*. Hobart: NCCARF Publication, CSIRO, 1–16.

Rigby CL, Carlson J, Derrick D, Dicken M, Pacoureau N, Simpfendorfer C. 2025. *Carcharias taurus* (amended version of 2021 assessment). *The IUCN Red List of Threatened Species* 2025: e.T3854A232113997. https://dx.doi.org/10.2305/IUCN.UK.2025-2.RLTS.T3854A232113997.en

Smith KR, Scarpaci C, Louden BM, Otway NM. 2015. Behaviour of aggregated grey nurse sharks *Carcharias taurus* off eastern Australia: similarities and differences among life-history stages and sites. *Endangered Species Research* 27: 69–85. https://doi.org/10.3354/esr00652

Suthers IM, Young JW, Baird ME, Roughan M, Everett JD, Brassington GB, Byrne M, Condie SA, Hartog JR, Hassler CS, et all. 2011. The strengthening East Australian Current, its eddies and biological effects—an introduction and overview. *Deep Sea Research Part II: Topical Studies in Oceanography* 58: 538–546. https://doi.org/10.1016/j.dsr2.2010.09.029

Unidive. 2025. Unidive dive sites. Available at: https://www.unidive.org/diving/dive-sites Accessed October 2025.