

# Establishing a long-term monitoring program in a transitional reef system

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## **Project**

A growing body of evidence indicates that temperate marine ecosystems are being tropicalised due to the poleward extension of tropical species. Such climate mediated changes in species distribution patterns have the potential to profoundly alter temperate communities, as this advance can serve to push temperate taxa, many of which are southern Australian endemics, southward. These changes can lead to cascading effects for the biodiversity and function of coastal ecosystems, including contraction of ranges/habitats of sensitive cool water species. This study will establish a long-term marine biodiversity monitoring program at Minden Reef and Hall Bank which are two important reefs in the vicinity of Fremantle that are not currently part of any long-term monitoring programs.



**Funding:** Most equipment and materials will be provided by the project supervisors.

**Special requirements:** This project will involve scuba diving and handling equipment underwater. A high level of scuba experience is preferred (minimum 50 hours logged dives) along with a high level of physical fitness. It is preferable if the student has their own dive gear and a current first-aid certificate. An interest in marine biodiversity and a willingness to identify a broad range of marine life including corals, fish and echinoderms is a necessity.

**Start date:** This project is only being offered with a mid-year 2022 start date.

## **References:**

- Thomson, D.P. and Frisch, A.J., 2010. Extraordinarily high coral cover on a nearshore, high-latitude reef in south-west Australia. *Coral reefs*, 29(4), pp.923-927.
- Richards, Z., Kirkendale, L., Moore, G., Hosie, A., Huisman, J., Bryce, M., Marsh, L., Bryce, C., Hara, A., Wilson, N. and Morrison, S., 2016. Marine biodiversity in temperate western Australia: multi-taxon surveys of Minden and Roe reefs. *Diversity*, 8(2), p.7.