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REVIEW

The Great Southern Reef

Written by Paul Venzo and Prue Francis, Illustrated by Cate James. Published in 2022 by CSIRO Publishing, Vic.

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The Great Southern Reef is a complex and diverse Australian reef ecosystem that is relatively unknown and often overshadowed by the iconic Great Barrier Reef. It is classified as a rocky, temperate reef system dominated by kelp (species: *Ecklonia radiata*) that spans more than 8000 km of coastline and covers over 71,000 km^2 (Bennett et al., 2015). Comprised of spatially connected kelp forests, the Great Southern Reef starts in the subtropical waters of New South Wales and ends in Kalbarri, Western Australia: from the east coast of mainland Australia, south around Tasmania, to the entirety of Australia's southern coastline, up to Western Australia (Bennett et al., 2015). The Great Southern Reef is inhabited by more than 5000 species and is a recognized global biodiversity hotspot for various phyla, including seaweeds, sponges, crustaceans, echinoderms and molluscs (Bennett et al., 2015), with high levels of endemism (Kerswell et al., 2006) and potentially harbouring hundreds of species yet to be discovered (Bennett et al., 2015). This relatively unknown reef system also plays an integral role in the Australian economy, with an annual revenue of $10 billion from tourism and fishing alone. Although approximately 70% of Australians live, work or engage in recreation in close proximity of the Great Southern Reef, public knowledge and awareness of this extensive reef ecosystem is, nevertheless, limited or non-existent, despite its scale and significance (Bennett et al., 2015).

The illustrated children's book, *The Great Southern Reef*, by P. Francis, P. Venzo and C. James, raises much-needed awareness of this unique reef ecosystem as 'an entity' and increases children's, as well as parents' and teachers' knowledge on the flora and fauna inhabiting kelp forests. Through the guidance of Professor Seaweed, Frankie and Sam explore a sandy beach and the adjacent rockpools after a big strong storm. As they walk and examine the terrain in closer detail, they discover many interesting items that have washed ashore. For example, Frankie and Sam discover and learn about cuttlefish and cuttlefish shells, turbo snails, sea anemones and how other animals rely on this complex ecosystem. As they continue on their journey and search the beach for more 'marine curiosities', they also discover a shark egg and learn about brown kelp, green sea lettuce and little beads of seaweed called Neptune's necklace. Through such unique treasures found, they are given a glimpse into the wonders of the underwater world of the Great Southern Reef, while an underwater spread showcases the diversity of life on kelp forests, from spotted wobbegongs to weedy seadragons. A map helps illustrate the vastness of the Great Southern Reef, as it stretches from New South Wales all the way to Western Australia. This book encourages us all to care for the

ocean by picking up rubbish and the various plastic bottles and bags that litter our beaches, pollute our oceans and cause harm to animals. Professor Seaweed also educates children on various products that use seaweed, including delicious seaweed ice-cream! This book concludes with facts about the Great Southern Reef and a useful glossary for children to learn more about key concepts.

Through this story, *The Great Southern Reef* introduces children to the activity of beachcoming, i.e. the act of an individual 'combing' the strandline/intertidal zone in order to find items of interest (Trewhella and Hatcher, 2015). Beachcombing has traditionally been used in the education sector to not only discover items of interest, but also to collect items to be utilized in the classroom for various projects, e.g. sand casting, sea mobiles, seaweed collections, fish printing (e.g. White, 1977). *The Great Southern Reef*, however, emphasizes the importance in leaving such treasures where children find them and to take only rubbish with them. Such beach 'wrack' items can act as important microhabitats and food resources for smaller animals — a great added conservation message in this book. *The Great Southern Reef* is a wonderful asset to any home or Australian school curriculum (or schools aboard), particularly those in close proximity to kelp forests, with added opportunities to participate in beachcoming activities/hands-on learning on field trips. Although the book would have benefited from more underwater ecosystem scenes, it serves as an excellent starting point that sparks curiosity and encourages children to learn more. *The Great Southern Reef* is recommended for children aged 6–9 and is available in both hardcover and E-book from the CSIRO homepage. It is written by Deakin University colleagues with a complementary skill set and expertise in the fields of children's literature and marine science.

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Sharon Wismer is a marine biologist, children's non-fiction author and co-founder of SEA Kids Alliance — an online platform that connects children to ocean science (@seakidsalliance). Her postdoctoral research at James Cook University investigated the impacts of mass coral bleaching on coral-associated reef fishes of the Great Barrier Reef. Her first children's book *Keepers of the Reef* introduces children to the critical functional roles reef fish play in keeping coral reefs healthy — she enjoys writing books that make emerging science both accessible and exciting for children.

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