

The Benthic Ecology subprogram provides scientific and technical advice to State and Commonwealth Governments in relation to the sustainable utilisation of Australia's temperate marine resources.

Program overview

This subprogram focuses on conducting ecological studies on hard and soft substrate communities. In particular, research is conducted on the population and community organisation of bottom dwelling fauna, and on trophic linkages between benthos and demersal fish.

The subprogram undertakes benthic research on coastal, shelf and deep-sea environments throughout southern Australia. A large component of this research is directed towards the selection and ongoing assessment of State and Commonwealth Government marine reserves (including the Great Australian Bight Marine Park).

The subprogram also collaborates with the Wild Fisheries Program on conducting research and providing scientific advice on the sustainable management of South Australia's Giant Crab, Blue Crab and Prawn Fisheries. A key focus of this research is on understanding the population dynamics of the fisheries and ways to improve harvesting strategies. The subprogram further undertakes research on the ecological impact of these fisheries.

Subprogram staff have strong associations with leading national and international researchers and have built successful multi-disciplinary proposals to investigate water circulation patterns in the Southern Ocean and their influence on benthic productivity. These collaborations enhance the delivery of high quality benthic research for the region.

Current projects

Evaluating the effectiveness of the Great Australian Bight Marine Park in representing regional biodiversity.

Evaluating stocks and sustainable harvesting levels for the South Australian Giant Crab (*Pseudocarcinus gigas*) fishery.

Developing a by-catch risk assessment model for the Spencer Gulf prawn (*Melicertus latisulcatus*) fishery.

Assessing diversity and distribution of sponges from Australia's temperate continental shelf.

Quantifying the distribution and community structure of benthic invertebrates and fish in deep-sea canyons off the Bonney coast and Kangaroo Island, South Australia.

Biology and distribution of pipefish and seahorses (Syngnathidae) from the Spencer Gulf.

Mapping marine habitats and biodiversity in South Australian State waters to support marine reserve planning.

Staff

Dr David Currie Subprogram Leader

Dr Currie received a PhD from the University of New England. He has extensive knowledge and experience in marine benthic ecology developed over 20 years working as research scientist in the UK, New Zealand and Australia. His research focuses on the diversity, distribution and population dynamics of demersal fish and invertebrates.



Ms Shirley Sorokin Research Scientist

Ms Sorokin has a Degree in Biology from Flinders University. Her extensive knowledge of marine invertebrates has been developed over 18 years while researching coral reproduction and novel biochemical compounds from benthic organisms. She currently identifies and manages large collections of invertebrates from southern Australia, and has produced three catalogues of South Australian sponges.

Mr Keith Rowling Research Scientist

Mr Rowling has an Honours Degree in Marine Biology for Flinders University. His post-graduate research over the last 16 years has concentrated on marine ecology and benthic assessment methodology, particularly in the context of assessing environmental impacts in marine benthic systems and the impact and eradication of exotic marine pests.

Contact

Dr David Currie,
Subprogram Leader - Benthic Ecology
Tel: 08 8207 5318 Fax: 08 8207 5406
E-mail david.currie@sa.gov.au
www.sardi.sa.gov.au