

Areas of expertise

Benthic ecology, Seagrass epifauna interactions, Fish use of habitat, Population and community modelling, Environmental assessment.

Countries of work experience

Australia, Jamaica, USA.

Overview of experience and qualifications

Dr Tanner has 14 years experience in marine ecology, working in both tropical and temperate systems. He has published 23 papers, most in high profile international journals.

In the last 4 years, he has played a key role in the development of the Environment & Ecology Program, which he leads. This program conducts research into environmental assessment of human activities in marine ecosystems, including aquaculture, pollution, dredging etc; the effects of marine invasive pests; and oceanography. He has been heavily involved in several major projects in this time, include a large multidisciplinary study of the state's coastal waters to identify and assess areas potentially suitable for the development of aquaculture. Other large projects include the environmental assessment of proposed dredging operations at Outer Harbour, and the assessment of the fate of wastes from aquaculture operations. He currently runs projects to conduct an environmental audit of aquaculture developments in SA, and to further develop models of finfish carrying capacity. In addition, he has just commenced a major collaborative project to develop an integrated hydrodynamic, biogeochemical and sediment model of the Port Lincoln tuna farming area, and is habitat theme leader for the CLLAMM Ecology cluster, overseeing the development of a dynamic habitat model of the Coorong.

Prior to that, he spent 3 years working with SARDI examining habitat change in Gulf St Vincent. This focussed predominantly on the consequences of seagrass fragmentation for associated fauna, and working with the prawn industry to examine the impacts of commercial trawling on benthic fauna.

Another component of this work was the assessment of habitat distributions over large scales using remote video cameras. He has also done some work on the ecology of introduced marine species, to develop an understanding of the potential impacts these species may have on our ecosystems.

Prior to moving to SARDI, he spent 8 years researching the population and community ecology of benthic invertebrates on coral reefs, involving extensive field surveys and experimental work, as well as mathematical

modelling. This is continuing, with the current focus being long-term (40 years) dynamics of corals.

Dr Tanner has also maintained close involvement with several universities, and participates in undergraduate and graduate teaching. At the undergraduate level, he has contributed to courses on coral reef ecology, marine ecology, biometrics and population modelling, while at the graduate level he has supervised 10 honours and 4 PhD students.



Professional appointments:

2002-present: Program Leader – Environment & Ecology.

2000- present: Affiliate lecturer, School of Earth & Environmental Sciences, University of Adelaide.

1999-2001: Marine Ecologist, SARDI Aquatic Sciences.

1996-1998: ARC postdoctoral fellow, Dept of Marine Biology, James Cook University.

1995: Research associate, James Cook Uni.

Research and consulting

2005-: Development of an integrated model of tuna farming zone

2003-: Environmental audit of South Australian aquaculture

2003-: Carrying capacity modelling for finfish and shellfish aquaculture

2002-: Collection of technical data to underpin the aquaculture management planning process.

2002-: Environmental assessment of proposed dredging operations at Outer Harbour.

2001-: Examination of the environmental impacts of aquaculture, and potential mitigation strategies.

1999-: Habitat change in Gulf St Vincent.

1998-: Demographic consequences of clonality

1993-2000: Population ecology and long-term decline of corals in Jamaica.

1991-: Studies on the population and community ecology of corals and other benthic invertebrates on the Great Barrier Reef.

Contact

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