

Dr Anthony Fowler, Wild Fisheries SARDI Aquatic Sciences

Areas of expertise

Life history of marine organisms, population and fishery biology, population ecology.

Countries of work experience

Australia, Canada.

Overview of experience and qualifications

Dr. Fowler has an extensive knowledge of fish and fishery biology based on more than 25 years of experience in this field, from work done in temperate and tropical systems in several Australian states and also Canada. He has published numerous scientific papers and reports, assisted in the organisation of several national and international conferences and symposia and given many presentations at such meetings.

His expertise is in the analysis of population biology and life history of marine organisms, particularly finfish species. Different areas of experience include: using a diversity of gear types to sample the different life history stages of fishes; determining stock structure; describing patterns of adult movement and pathways of larval advection; and determining the age, growth and reproductive biology of fish. His particular field of expertise is in analysing the structure and chemistry of otoliths to reconstruct aspects of fishes' lives.

Dr Fowler has worked on the population ecology of coral reef fishes, which has contributed to ecosystem management of the Great Barrier Reef. He was part of an international team that pioneered the analysis of otolith chemistry to determine movement patterns and stock structure of fish populations, and has since worked on related projects in both Canada and Australia. His focus is now on fishery research towards managing the marine scalefish fisheries of South Australia. This has involved analysis of the population characteristics of three primary finfish species, i.e. King George whiting (*Sillaginodes punctata*), snapper (*Pagrus auratus*), and southern sea garfish (*Hyporhamphus melanochir*), as well as numerous other vertebrate and invertebrate species that are taken in this fishery.

Dr. Fowler maintains a strong involvement with the South Australian universities. He has an affiliate lectureship with the University of Adelaide, and has been involved with undergraduate teaching at Flinders University for many years. He has supervised numerous Honours and 3 completed PhD projects, and is currently co-supervising four PhD projects.

Professional appointments

2004-2008: Leader of Marine Scalefish Research Group, SARDI Aquatic Sciences.

2000-present: Affiliate lecturer, Department of Environmental Biology, University of Adelaide.

1993-2004: Senior Research Scientist, SARDI Aquatic Sciences.

1992-1993: Post-doctoral Research Fellow, Bedford Institute of Oceanography, Nova Scotia, Canada.

1988-1992: Research Associate, Australian Institute of Marine Science, Townsville, Qld.

Research and consulting

2008: Assessment of by-catch in the Marine Scalefish fishery of South Australia.

2005-07: Population and fishery biology of southern sea garfish (*Hyporhamphus melanochir*) in South Australia.

2000-04: Population and fishery biology of snapper (*Pagrus auratus*) in South Australia.

1995-00: Development of an integrated fisheries management model for King George whiting (*Sillaginodes punctata*) in South Australia.

1995-01: Supervision of PhD projects on population biology and fisheries for southern calamary and giant Australian cuttlefish.

1993-95: Analysis of early life history of King George whiting (*Sillaginodes punctata*).

Contact

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