

The Climate and Catchment Subprogram provides research and advice across government, NGOs and the community regarding the ecology and management of catchment ecosystems in southern Australia in the context of climate change and other pressures. The main aim of the subprogram is to undertake research on the drought and climate impacts on the freshwater and estuarine biodiversity, synthesise relevant knowledge and develop system understanding to support natural resource management.

## Overview

The subprogram conducts a wide range of research projects relating to the drought impacts and refugia management, ecosystem resilience, environmental water requirements, flow related fish ecology, and environmental monitoring.

Projects undertaken by the subprogram have close links and collaborations with state and federal agencies and community groups including the Murray Darling Basin Commission, CSIRO Land and Water, South Australian Murray Darling Basin Natural Resources Management Board, Adelaide and Mt Lofty Ranges Natural Resources Management Board, Department for Environment and Heritage, Department of Water Land and Biodiversity Conservation, Primary Industries and Resources SA.

## Key Research Projects

2006 – Present: CLLAMMecology – flow related fish and fisheries ecology in the Coorong, South Australia (funded by the FRDC, Water for a Healthy Country National Flagship, and SA MDB NRMB)

2007 – Present: A scientifically defensible predictive management tool for Lake George in the South East SA (funded by the Centre for Natural Resource Management (CNRM), DWLBC)

2008 – Present: The protection of drought refugia for native fish in the Murray-Darling basin (funded by the MDBC)

2008 – Present: Ecosystem resilience and importance of refugia for native fish communities/populations (funded by the MDBC)

2006 – Present: Design and implementation of fish monitoring program for the Mount Lofty Ranges (funded by the AMLR NRMB and DWLBC)

2005 – Present: Influence of river flow on larval fish ecology in the lower River Murray (CNRM, DWLBC, SA MDB NRMB)



2005 – Present: Native fish monitoring in the lower Murray (funded by PIRSA Fisheries)

## Selected Publications

Bucater L, Cheshire KJ & Ye Q (2009) Fish spawning in the lower River Murray icon sites, South Australia: with reference to drought intervention. SARDI research report series number: 377.

Cheshire, KJ and Ye, Q. (2008). Larval fish assemblages below Locks 5 and 6, in the River Murray, South Australia from 2005 to 2007: with reference to water manipulation trials. SARDI Aquatic Sciences, Adelaide, pp 42. SARDI research report series number: 175

Higham, J., Ye, Q. and Smith, B. (2005). Murray-Darling Basin Drought Monitoring: 'Monitoring small-bodied fish in the lower Murray during and after drought conditions in 2003-2004'. Project Final Report to Department of Water, Land & Biodiversity Conservation. SARDI Aquatic Sciences. Publication No. RD04/0154. 40 pp.

McNeil, D.G. and Closs, G.P. (2007). Behavioural responses of a south-east Australian floodplain fish community to gradual hypoxia. *Freshwater Biology* 52 (3), 412–420.

McNeil, D.G. and Hammer, M. (2007). Biological review of the freshwater fishes of the Mount Lofty Ranges. South Australian Research and Development Institute (Aquatic Sciences), Adelaide. 104pp. Publication number: F2006/000335.

Ye, Q (2005). Golden perch (*Macquaria ambigua*). Fishery assessment report to PIRSA Fisheries. SARDI Research Report Series No. 71. SARDI Aquatic Sciences Publication No: RD04/0167. 75 pp.

Ye, Q and Zampatti, B (2007) Murray cod stock status: the Lower River Murray, South Australia. Stock Status Report to PIRSA Fisheries. South Australian Research and Development Institute (Aquatic Sciences), Adelaide, 32pp. SARDI Publication Number F2007-000211-1.

Ye, Q., Cheshire, K. J. and McNeil, D. G (Eds) (2010). Influences of salinity, water quality and hydrology on early life stages of fishes in the Lower River Murray, South Australia. South Australian Research and Development Institute (Aquatic Sciences), Adelaide. SARDI Publication No. F2009/000470-1-6. SARDI Research Report Series No. 446. 179 p.

#### Staff

Dr Qifeng Ye – Acting Subprogram Leader

Dr Dale McNeil – Senior Scientist

Dr Katherine Cheshire – Senior Scientist

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Dr Qifeng Ye  
Acting Subprogram  
Leader



Dr Qifeng Ye has a range of skills and extensive experience in fish and fishery biology, ecology and population dynamics accumulated through 18 years of environmental and fishery related work.

This has been done in freshwater, estuarine and marine systems, in several countries. She has written many publications including journal papers, book chapters, articles and technical reports and presented her research work at national and international conferences.

After completing her Ph.D in Fish Ecology and Fisheries Science in the USA, Dr Ye joined SARDI as a senior scientist in 1998, leading a Fisheries Research & Development Corporation (FRDC) funded three year research project addressing the fishery biology and habitat ecology of southern sea garfish in southern Australia.

Since 2001, she has been the senior scientist and leader of the Inland Waters research team. In the last few years, Dr Ye has successfully attracted multi-million dollars of research grants and grown the team into a significant research Program. She is currently the Principal Scientist and Program Leader for IWCE. Dr Ye has been a key scientist in a number of state and national collaborative projects on fish biology and ecology.

Dr Ye represents SA on the Murray Darling Basin Commission (MDBC) Native Fish Strategy Implementation Working Group. With her professional and technical skills, she is also a current member of a number of NRM and Science committees such as MDB Murray Cod Task Force, SRA Fish Task Force, CLLAMM Science Advisory Group, Murray Futures Project Lower Lakes Program Technical Committee.

#### Contact

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