

Jason Nicol - Plant Ecology

SARDI AQUATIC SCIENCES

SARDI



SOUTH AUSTRALIAN
RESEARCH AND
DEVELOPMENT
INSTITUTE

Areas of expertise

Freshwater and riparian plant ecology, recruitment ecology, impacts of altered hydraulic regimes, habitat assessment and seed banks.

Countries of work experience

Australia.

Overview of experience and qualifications

Jason Nicol is an experienced aquatic ecologist who has worked on the ecology of aquatic, wetland and riparian vegetation for the past ten years. He has excellent knowledge of the aquatic and riparian vegetation the lower Murray and Darling Rivers, southeast of South Australia, Adelaide and Mt Lofty Ranges, the potential ecological impacts of altered hydraulic regimes and seed banks. Jason has written or co-authored over 35 publications including papers in refereed journals, management plans, technical and consultancy reports and conference papers and is a member of the River Murray Wetlands Technical Support Group, Chowilla Environmental Flows Working Group, Lake Frome SE Technical Committee, Coorong Lower Lakes and Murray Mouth Scientific Advisory Group.

From July 2000 to August 2004 Jason undertook and completed a CRC for Freshwater Ecology and Murray Darling Basin Commission funded PhD investigating the impact of water level fluctuations and river regulation on the flora of the Menindee Lakes. During that time he also taught biology and ecology to level I, II and III students at The University of Adelaide and from 2002 to 2004 was a mentor on the Rotary Health of the River youth forum at Lake Cullulleraine. Jason also worked as a part time research officer for the Murray Darling Freshwater Research Centre's Lower Basin Laboratory undertaking the seed bank component on a project funded by the New South Wales Murray Wetlands Working Group investigating the impact of domestic stock on the sediments of Thegoa Lagoon.

Jason is currently working on numerous projects including the vegetation components of The Living Murray condition and intervention monitoring for all South Australian Icon sites, the vegetation component of the Lake George ecology

project and impacts of the expansion of the Waikerie Salt interception scheme on floodplain vegetation.

Professional appointments:

2008-Present: Plant Ecology Subprogram Leader, SARDI Aquatic Sciences.

2004-2008: Senior Research Officer, SARDI Aquatic Sciences.

2003-2004: Part Time Research Officer, Murray Darling Freshwater Research Centre.

2000-2004: Part Time Tutor Department of Environmental Biology, The University of Adelaide.

1999-2000: Project Officer, Wetland Care Australia.

1996-1998: Technical Officer (Analytical Chemistry), Department of Agronomy and Farming Systems, The University of Adelaide.

Research and consulting:

2005-10: Chowilla Icon Site vegetation condition monitoring.

2005-09: Vegetation monitoring of Chowilla river red gum watering sites.

2008-09: Lower Lakes Icon Site vegetation condition monitoring.

2008-09: Drought draw down vegetation monitoring.

2008-09: Wetland refilling (acid sulphate spoil mitigation) vegetation monitoring.

2008-09: Penfolds Lagoon baseline vegetation survey.

2008-09: Impact of the expansion of the Waikerie salt interception scheme on floodplain vegetation.

2008-09: Modelling understorey vegetation response to the Chowilla environmental regulator.

2004-08: Vegetation communities of the Chowilla Anabranche and Floodplain.

2005-08: Fish habitat assessment framework of SA River Murray.



Government
of South Australia

2007-08: Vegetation component of 2007 River Murray Wetlands baseline survey.

2007: Literature Review, Current knowledge of the flora of coastal lagoon estuaries in southeastern Australia.

2007: Pest plant risk assessment of the Chowilla environmental regulator

2006-07: Vegetation component of 2006 River Murray Wetlands baseline survey.

2006-07: Monitoring *Ruppia megacarpa* populations in the Murray Estuary and North lagoon of the Coorong.

2006: Baseline vegetation survey of Lake Bonney SE, Admella Flats and Bucks Lake.

2005-06: Vegetation component of 2005 River Murray Wetlands baseline survey.

2005-06: Mannum Swamps baseline vegetation survey.

2005-06: Onkaparinga River environmental flows project (vegetation monitoring).

2005: Literature Review, Ecology of *Ruppia* spp. in South Australia with Reference to the Coorong.

2003-2004: Impact of grazing on the seed banks of Thegoa Lagoon (NSW).

2000-2004: Investigations into the vegetation dynamics of the Menindee Lakes, including:

- Seed bank composition.
- Spatial patterns of seed bank density floristic composition.
- Water regime requirements for recruitment of common floodplain species.
- The impact of drought on recruitment and vegetation succession.
- Flooding tolerance of *Xanthium occidentale*, *Cyperus gymnocaulos* and *Ludwigia peploides*.
- Effect of soil nutrient enrichment on recruitment from the seed bank.

1998-1999: Effect of different water regimes on recruitment from the Bool Lagoon seed bank.

1998-1999: Recruitment ecology of *Typha domingensis*, *Triglochin procerum* and *Melaleuca halimifolium* from seed under different water regimes.

Contact

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