

Plant Ecology Subprogram

SARDI AQUATIC SCIENCES

The Plant Ecology Subprogram provides research and advice across government, NGOs and the community regarding the ecology of aquatic and riparian vegetation in freshwater dependant ecosystems in southern Australia. The main aim of the subprogram is to undertake high quality applied research on the ecology of aquatic and riparian vegetation in freshwater dependant ecosystems to aid in the conservation and management of the aforementioned systems.

Overview

The subprogram conducts a wide range of research projects relating to the ecology of aquatic and riparian vegetation including impacts of altered hydraulic regimes, environmental water requirements, impacts of increased salinity, effects of engineered flooding, impacts of drought on aquatic ecosystems, baseline vegetation surveys and condition and intervention 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 and the Mid Murray, Riverland West, Berri Barmera and Loxton to Bookpurnong Local Action Planning Committees.

Current Research Projects

2008-Present: Vegetation condition monitoring, Lower Lakes Living Murray Icon Site.

2008-Present: An evaluation of the proposed Chowilla Creek environmental regulator on terrestrial understorey and aquatic vegetation.

2007-Present: Environmental water requirements of Mt Lofty Ranges streams.

2006-Present: Vegetation condition monitoring Chowilla Living Murray Icon Site.

2006-Present: Vegetation dynamics of submergent macrophytes in Lake George.

2005-Present: Fish habitat assessment of SA River Murray from NSW border to Wellington.

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



Recent Publications

Marsland, K.B. and Nicol, J.M. (2008a). '2007 River Murray Wetlands Baseline Survey. Vegetation Component.' South Australian Research and Development Institute (Aquatic Sciences), SARDI Publication Number F2008/000058, Adelaide.

Marsland, K.B. and Nicol, J.M. (2008b). 'Markaranka Flat Baseline Vegetation Survey.' South Australian Research and Development Institute (Aquatic Sciences), SARDI Publication Number F2008/000059-1, Adelaide.

Nicol, J. (2007a) 'Risk of pest plant recruitment as a result of the operation of Chowilla environmental regulator.' South Australian Research and Development Institute (Aquatic Sciences), SARDI Publication Number F2007/000253-1, Adelaide.

Nicol, J., Muston, S., D'Santos, P., McCarthy, B. and Zukowski, S. (2007). The impact of sheep grazing on the soil seed bank of a managed ephemeral wetland: implications for management. *Australian Journal of Botany* 55: 103-109.

Nicol, J.M. (2007b) 'Current Ecological Knowledge of the Flora of Coastal Lagoon Estuary Systems in South-Eastern Australia. A Literature Review.' South Australian Research and Development Institute (Aquatic Sciences), SARDI Publication Number F2007/000252-1, Adelaide.

Staff

Dr Jason Nicol

Subprogram Leader

Jason Nicol is an experienced plant ecologist who has worked on the ecology of aquatic, and riparian vegetation for over 10 years. Jason completed his Ph.D. investigating the impacts of water level fluctuations on the flora of the Menindee Lakes storage at the university of Adelaide in 2004. He has excellent knowledge of the aquatic and riparian vegetation the lower Murray and Darling Rivers, the southeast of South Australia and Mt Lofty Ranges and Adelaide area and the potential ecological impacts of altered hydraulic regimes and wetland seed banks. Jason has written or co-authored over 30 publications including papers in refereed journals, management plans, technical and consultancy reports and is a member of the River Murray Wetlands Technical Support Group, Lake Frome SE Technical Committee, Chowilla E-Flows Working Group and Coorong, Lower Lakes and Murray Mouth Scientific Advisory Group.



Other Subprogram Staff

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