

UTS Freshwater Ecology Report 2003: Community Guided Research Focusing on the Manly Lagoon Catchment

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UTS Students and Research Topic:

Nicole Balodis and Evan Guyatt

Waterbirds of the Manly Lagoon Catchment.

Jodie Larsen and Claire Leonard

Survey of seagrasses in Manly Lagoon.

Renee Fairhurst and Kathryne Graham

Seagrass bed-sediment characteristics of Manly Lagoon.

Heather Brown and Adam McSorely

Macroinvertebrate survey of Cootamundra Creek.

Larissa Abbott and Peter Marshman

Macroinvertebrate analysis, comparing streams of varying water quality, within the Manly Dam Catchment.

Andrew Baker and Stuart Young

(a) *Water quality in the upper reaches of Brookvale Creek.*

(b) *An investigation into the key plant nutrients of Brookvale Creek and Manly Lagoon.*

Andrew Smith and Dale Harkess

Water quality of Manly Lagoon.

Emma Andersson and Chris Donnan

Surface water quality in the middle reaches of Brookvale Creek.

Ben Johnston and Dominica Minnaard

Sediment nutrient release within the Manly Lagoon Catchment.

Background

This edition of the 'UTS Freshwater Ecology Report' is the completion of the fourth cycle of a community based university undergraduate programme that was initiated in 2000. The original concept arose from a questioning of how undergraduate environmental science education is conceived and delivered, as well as how it is justified as a constructive contribution to wider society.

Traditional undergraduate science education remains to a large extent isolated from wider society and perhaps has a parochial perspective because of institutionalised learning. There has been concern that new graduates often have a narrow theoretical knowledge of environmental issues such as catchment management, ecological sustainability, and the communication lines between professional scientists and the external community. One objective of this programme is to integrate university students into current conservation action, as part of their formal environmental science education to broaden their perspective.

With this objective in mind, students are given first-hand experience conveying scientific knowledge into society through a public field day, collaborative work with community members, a public seminar explaining their research findings and distribution of this written report. This direct contact encourages feedback from the community to show them that environmental management is not always a "black and white" affair.

Historical background, needs of the wider community, personal bias, governmental planning or legislative protocols and business economics are but a few of the myriad of the issues that come into play for any development proposal. Students should be aware of these diverse issues and the range of stakeholders involved. Thus another aim of the UTS subject 'Freshwater Ecology' is to gain "street credibility" for the work that is undertaken by researching topics that are supplied by the community.

The process followed to complete this cycle of the programme is guided at two levels and time scales. One is the 3-month scientific research methodology for each study encompassing observations, measurements, analysis, and interpretations of data leading to conclusions about the state of the natural environment. The second is an over-arching guide provided by a year-to-year cycle of community input, building up of information, evaluation of the usefulness of research and learning objectives, as well as forging links between stakeholders to address environmental problems in the Manly Lagoon Catchment.

The 2003 'Freshwater Ecology' programme is the last to be offered in the Manly-Warringah area for the foreseeable future. We hope that the thirty three projects ranging from water-quality to water-birds has made a useful contribution towards managing the precious waterways of Manly Dam, Brookvale Creek, Burnt Bridge Creek and the Lagoon in the lower section of the catchment.

We would like to thank all contributors to various aspects of the program over the last four years. Your participation at the community field days, support of students during their projects and attendance at the public seminars has given the program life.

Peter Jones & Richard Lim