

## LERNZ Roadshow and Workshops 2012

A 15-stop nationwide roadshow has recently been completed LERNZ team members. The objective of the road show was to demonstrate a range of lake restoration tools developed by the research programme.

LERNZ Science Leader, David Hamilton, together with the intermediate outcome leaders Deniz Özkundakci and Adam Daniel made up the core roadshow team alongside Andy Bruere from the Bay of Plenty Regional Council, Susie Wood from Cawthron Institute, Rob Pitkethley from Fish & Game and Rich McDowell from AgResearch.

The follow up is a series of stakeholder-driven workshop topics for August. Requests for the workshop programme content are welcome as planning is about to begin. The roadshow discussions demonstrated overwhelming interest in remote sensing of water quality and genetic tools for rapid assessment of cyanobacteria and toxin potential, as well as pest fish detection.

Further workshop details will be coming soon via our website ([www.lernz.co.nz](http://www.lernz.co.nz)) or contact Jo Faber for more information [j.faber@waikato.ac.nz](mailto:j.faber@waikato.ac.nz)

## Ecological Modernisation in New Zealand: A Critical Evaluation of Environmental Policy Practice, Process, and Prospects

LERNZ is pleased to welcome Jeanette Wright to the programme as part of an expansion in the scope of research into economic and social influences on lake restoration. Jeanette is a final-year PhD student in Political Science and Public Policy, supervised by Assoc. Prof. Priya Kurian. Her PhD is entitled '*Ecological Modernisation in New Zealand: A Critical Evaluation of Environmental Policy Practice, Processes and Prospects for Sustainability*'.

Jeanette has examined why New Zealand's environmental policy appears to be failing, despite being underpinned by sustainability values embedded in the RMA.

Given the dairy industry's significance to the economy in New Zealand, Jeanette chose it for her case study to explore the complexities in trying to balance economic growth with environmental protection and the relevance of current policy models.

As part of her research, Jeanette will soon be carrying out a Q-sort stakeholder survey. She hopes that some of you involved with the LERNZ project will participate in this so a strong scientific stakeholder view will be included. It will take about an hour of your time to complete. If you are interested and willing to participate, please contact Jeanette at [jmw6@waikato.ac.nz](mailto:jmw6@waikato.ac.nz) or Jo Faber at [j.faber@waikato.ac.nz](mailto:j.faber@waikato.ac.nz) for more information.

## Welcome

LERNZ would like to introduce Arianto Santoso. Ari is the newest PhD student joining the programme and will be studying under the supervision of Prof. David Hamilton.

Ari has moved with his wife and two children from Indonesia. Ari completed a B.Sc. at the University of Gadjah Mada in Indonesia and a M.Sc., at the University of Bremen in Germany. His research interests include organic matter and carbon cycling in aquatic ecosystems and nutrient dynamics in aquatic ecosystems.



New PhD student - Arianto Santoso

## Farewells

In December, LERNZ farewelled two researchers.

Donald Neal has left the University of Waikato where he was instrumental in developing the LERNZ database.

Wendy Paul has also moved on from LERNZ and is now using her expertise as a consultant (Wendy Paul Consulting) in phytoplankton analysis, website content and related endeavours (see <http://www.wpaulconsult.com/>).

LERNZ would like to wish both Donald and Wendy every success for the future.

## Presentations

In February the Royal Society arranged a series of public lectures in NZ by acclaimed author and expert in water law, Professor Robert Glennon. He discussed the anomalies of water use in the USA; from faux snow in Atlanta to supersized bathrooms in Las Vegas to mega corn farms in the mid-west. Prof Glennon spent two days in Hamilton, with staff and students getting an opportunity to present their work to him.

**David Hamilton** gave a joint presentation with Clive Howard-Williams (NIWA) and Richard McDowell (AgResearch) on “Scientific and Technical Challenges in Defining and Enforcing Limits” at the 3rd Annual Freshwater Management Forum in Wellington, 13-14 February. Copies of this presentation are available by contacting David Hamilton ([davidh@waikato.ac.nz](mailto:davidh@waikato.ac.nz)) who will also seek confirmation from Clive and Richard to forward a copy.

Also in February, the Bay of Plenty Regional Council (BOPRC) invited a group of LERNZ students and researchers to Rotorua to present their lake research projects to the public. The BOPRC has a unique relationship with the University, sponsoring the Chair in Lake Management and Restoration, and providing opportunities to students to research applied lake management issues

In March, **Chris McBride** travelled to China to update the Lake Taihu monitoring buoy, sponsored by the Nanjing Institute of Geography and Limnology (NIGLAS), Chinese Academy of Sciences.



Chris at Lake Taihu station working alongside a colleague from NIGLAS to upgrade their lake buoy

## Recent Publications

Collier, K. J., Demetras, N. J., Duggan, I. C. and Johnston, T. M. 2011. Wild record of an apple snail in the Waikato River, Hamilton, New Zealand, and their incidence in freshwater aquaria. *New Zealand Natural Sciences* 36: 1-9.  
<http://researchcommons.waikato.ac.nz/bitstream/handle/10289/5781/Wild%20record.pdf?sequence=1>

Dennis, M. A., Landman, M., Wood, S. A. and Hamilton, D. P. 2011. Application of flow cytometry for examining phytoplankton succession in two eutrophic lakes. *Water Science & Technology* 64: 999-1008.  
<http://www.iwaponline.com/wst/06404/wst064040999.htm>

For more information go to [www.lernz.co.nz](http://www.lernz.co.nz)

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Duggan, I.C. 2012. Urban planning provides potential for lake restoration through catchment re-vegetation. *Urban Forestry & Urban Greening* 11: 95-99.  
<http://www.sciencedirect.com/science/article/pii/S1618866711000744>

Duggan, I. C. and Duggan, K. S. 2011. Are botanical gardens a risk for zooplankton invasions? *Biological Invasions* 13: 2997-3003.  
<http://www.springerlink.com/content/q0278105602v60t1/>

Duggan, I. C. and Eastwood, K. R. 2012. Detection and distribution of *Craspedacusta sowerbii*: Observations of medusa are not enough. *Aquatic Invasions* 7: 271–275.  
[http://www.aquaticinvasions.net/2012/AI\\_2012\\_2\\_Duggan\\_Eastwood.pdf](http://www.aquaticinvasions.net/2012/AI_2012_2_Duggan_Eastwood.pdf)

Hoellein, T. J., Bruesewitz, D. A. and Hamilton, D. P. 2012. Are geothermal streams important sites of nutrient uptake in an agricultural and urbanising landscape (Rotorua, New Zealand)? *Freshwater Biology* 57: 116-128.  
<http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2427.2011.02702.x/abstract>

Pearson, L. K. , Hendy, C. H., Hamilton, D. P., Silvester, W. B., 2012. Nitrogen-15 isotope enrichment in benthic boundary layer gases of a stratified eutrophic iron and manganese rich lake. *Aquatic Geochemistry* 18: 1-19.  
<http://www.springerlink.com/content/f577n1363470v72h/>

Özkundakci, D. and Hamilton, D. P. 2012. Temporal coherence of water quality in mesocosms in a stratified eutrophic lake. *Journal of the Environment* 8(1): 37-46.

Puddick, J., Prinsep, M. R., Wood, S. A., Cary, S. C., Hamilton, D. P. 2011. Enhanced sample preparation for quantitation of microcystins by Matrix-Assisted Laser Desorption/Ionisation–Time of Flight mass spectrometry. *Phytochemical Analysis*.  
<http://onlinelibrary.wiley.com/doi/10.1002/pca.1356/abstract>

Taylor, C. M. and Duggan, I. C. 2012. Can biotic resistance be utilized to reduce establishment rates of non-indigenous species in constructed waters? *Biological Invasions* 14:307-322.  
<http://www.springerlink.com/content/x2303p7214583363/>

Wood, S. A., Kuhajek, J., de Winton, M. and Phillips, N. R. Species composition and cyanotoxin production in periphyton mats from three lakes of varying trophic status. *FEMS microbiology Ecology*. 79 (2) 312-326.  
<http://onlinelibrary.wiley.com/doi/10.1111/j.1574-6941.2011.01217.x/full>

Wood, S. A., Dietrich, D. R. Cary, S. C. and Hamilton., D. P. Increasing *Microcystis* cell density enhances microcystin synthesis: a mesocosm study. *Inland Waters* 2: 17-22.  
<https://www.fba.org.uk/journals/index.php/IW/article/viewFile/424/292>