

## Welcome to the Geography Discipline Newsletter!

### Double PhD Delight!



*Dr Clare Robertson (centre left) and Dr John Appleby (centre right) with supervisors Dr Ian Fuller (far left) Dr Kat Holt (far right).*

This year's May graduation ceremony saw two Geography students receive their doctorates. Congratulations to Dr Clare Robertson and Dr John Appleby. John and Clare both completed their undergraduate and Masters' degrees here at Massey. In addition to sharing a graduation ceremony, they both also share a similar research speciality – glaciers. Clare's research focused on the subaqueous morphology of calving glaciers in Aoraki/Mount Cook National Park. She investigated the controls on subaqueous ice ramp development and evolution at lake-calving glaciers using a unique combination of sub-bottom sonar, echo-sounding, and remote sensing. The aim of the research was to improve our understanding of how different parts of a glacier lose ice. A temporal and spatial evolutionary model of the area's glaciers and lakes was developed. The subaqueous morphology of Mueller, Hooker, and Tasman proglacial lakes was mapped. Results highlighted that glacier retreat predictions must consider subaqueous morphology in order to more accurately predict glacier retreat. It was also found that trends observed at one glacier cannot be used to infer the response of another glacier in the same region. In a further achievement, **Clare has also been jointly awarded the NZ Geographical Society's 'Best Doctoral Thesis' President's Award for 2013!** See the last page of this newsletter to find where some of Clare's research has been published.

John's research focused on the structural glaciology and dynamic behaviour of Fox Glacier. He investigated glacial structure using novel techniques, including isotope chemistry and ground-penetrating radar. In addition to detailing the contemporary structural glaciology, John reconstructed the historical surface structures of Fox Glacier over a 110 year period. A detailed structural map of the surface of Fox Glacier was constructed, as were a series of conceptual models of the evolution of glacier structures over time. The results highlight the highly dynamic behaviour of Fox Glacier in a global context. They also suggest that some existing theories of structural glaciology are inappropriate when considering the glaciers of South Westland.

If sharing research speciality wasn't enough, they also share a house, and are engaged to be married in February next year! We wish Clare and John all the best for their future.

# Innovative River Solutions Workshop: Solution to Pollution

The first River Solutions workshop was attended by over 100 delegates representing a range of institutions and groups, including: Greater Wellington, Waikato, Hawkes Bay, Taranaki and Horizons Regional Councils, Auckland Council, Manawatu District Council, DoC, MFE, Federated Farmers, NZ Landcare Trust, Fish & Game, NIWA, Landcare Research, Green Party, DairyNZ, Water & Environmental Care Association, Save our River Trust. International speakers included Prof Angela Arthington (Australian Rivers Institute, Griffith University), Dr Mike Stewardson (University of Melbourne), Prof Mark Macklin (Centre for Catchment & Coastal Research, Aberystwyth University), Dr David Rassam (CSIRO Land & Water). Of prominence from New Zealand were Prof Gary Brierley (University of Auckland) and Dr Kit Rutherford (NIWA), as well as Helen Marr (Perception Planning) and Graham Sevicke-Jones (Greater Wellington Regional Council).

Papers were presented under four themes: 1. Maintaining Ecological Integrity, 2. Maintaining Geomorphological Integrity, 3. Land management to maintain river limits, 4. Integration, policy and planning. Each session was followed by 20 minutes of lively discussion, including, and perhaps most especially, the final session of the day. Presentations approved for release by authors will be posted in pdf format on the River Solutions website: [www.massey.ac.nz/rivers](http://www.massey.ac.nz/rivers). A/Prof Russell Death and Dr Ian Fuller, who co-convene the group and co-ordinated the event, are working on a White Paper based on content and discussion at the Workshop.

A key message of the day (the solution to pollution) was that effective river and catchment management has to be found in an approach that integrates a range of river-science disciplines and connects with policy makers



and planners. There is no 'one size fits all', each river must be understood as a unique system in terms of its ecology, geomorphology and hydrology and must be managed by policy and planning accordingly. Innovative approaches are needed to manage the land sustainably and maintain river limits.

*Left: Delegates at the Solution to Pollution Workshop: a full house. The event was very well attended and received by a range of researchers and stakeholders including ecologists, geomorphologists, agricultural scientists, politicians and planners and several local community groups.*

## 145.303 Alpine Physical Geography 2013



This year's 145.303 fieldtrip to Fox Glacier was given the added excitement of looking at the results of a major flood in the valley and associated collapse of the glacier terminus just two weeks prior to the visit. In the photo on the far right students are mapping part of the active channel area, where once the glacier access footpath had been. Fortuitously Dr Fuller had passed through Fox on his family holidays in December, which provided some before-storm context (photos before and after). The trip also coincided with another storm event that closed access to the valley on Day 1 ("After" photo), but provided a great opportunity to see geomorphology in action!

## Welcome to two new staff!

*We have been lucky enough to have two new staff members join the Geography group in late 2012: Dr Sam McColl, and Dr Alastair Clement. Sam's speciality is slope stability, whilst Alastair's area of expertise is coastal processes. Their addition to the Massey Geography group will make for a broader, more comprehensive coverage of landscape processes in our teaching and research programme. Read on for a bit about Sam's background, as well as an account of Alastair's recent research trip to the UK.*

### Dr Sam McColl

Prior to coming to Massey, I completed my PhD thesis at Canterbury University. The thesis examined the stability of rock slopes in glaciated environments and the legacy that retreating glaciers leave in their wake in respect to those rock slopes. Working on my PhD project, under the corruptive influence of Tim Davies and Mauri McSaveney, was thoroughly enjoyable – I got to spend time in the hills – and I came away from it knowing that I wanted to carry on pursuing an academic career. I first became interested in that PhD research topic while working for the engineering geology team at GNS Science, Wellington. I realised then that a PhD project was probably the only way I was going to be able to pursue that interest; I didn't have enough academic freedom at GNS Science, but I did gain many valuable skills in landslide mapping, hazard analysis, and civil engineering ground investigation while working there. Now that I have a PhD and an academic position I suppose I have all the academic freedom I could wish for...provided I find funding...

At the time of accepting the Lecturer in Physical Geography position, I was in the difficult but fortunate situation of having to choose between this position and a position at an institute in Switzerland. On balance, it was the good humour I received from the interview panel at Massey that swung my decision. So far, 4 months into the job, that friendly and encouraging vibe has been shown by all those I have come across at Massey (staff and students alike), and I have not regretted my decision in the slightest. Of course, I also recognised other attributes that a career at Massey University could offer, even though the Swiss Alps, good cheese, and the entirety of Europe isn't quite in the back yard.

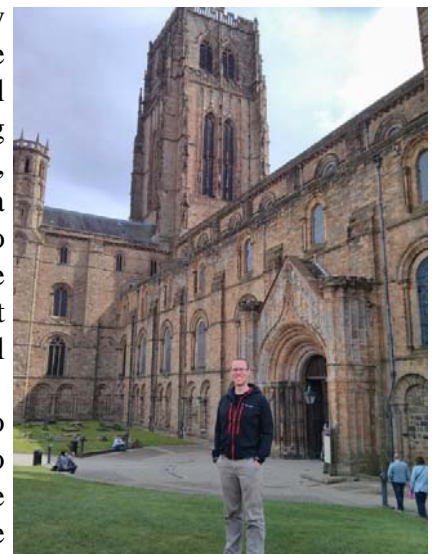
### Dr Alastair Clement

Alastair was on research leave in the UK from January to May 2013. Alastair spent the majority of his time in the UK in the Geography Department at Durham University linking with researchers in the Department's Quaternary Environmental Change Cluster and Sea Level Research Unit. While at Durham Alastair was mostly involved in writing research articles on Holocene sea level change in the New Zealand region, and the Holocene evolution of the Manawatu valley. As part of the sea level research Alastair developed linkages with Durham researchers who model the response of global sea levels to changes in the continental ice sheets. This yielded one of the most significant results of the trip: the first identification of the effect the Antarctic Ice Sheet may have on sea level changes around New Zealand.

While overseas Alastair presented seminars at Durham and also Northumbria University (Ian's old stomping ground, before he came to Massey!), and attended a two-day conference on Holocene climate change at the Royal Geological Society in London. Highlight of the visit to the Royal Society was viewing the first geological map of the UK, which is mounted in a giant frame in the Society's foyer – most of the time it is concealed from view behind a large curtain, and is only unveiled on special occasions!



*Dr Sam McColl in his natural environment. Photo Craig Beavan*



*Dr Alastair Clement in front of Durham Cathedral, during his recent research leave.*

## Selected Recent Publications from Geography Staff and Students

- Fuller, I.C.** (2012). Assessing Turitea sediment starvation: impacts of the Turitea dams on sediment characteristics in the Turitea Stream, Palmerston North. EnviroLink Report prepared for Horizons Regional Council, Report No. 2012/EXT/1278, ISBN 978-0-927189-83-5.
- Fuller, I.C.** (2012). Defining characteristics of a river channel. Report prepared for Pacific Farms Ltd.
- Fuller, I.C.** & Death, R.G. (2013). Towards innovative solutions for river management in New Zealand. In: Accurate and efficient use of nutrients on farms. (Eds L.D. Currie & C.L. Christensen). <http://flrc.massey.ac.nz/publications.html>. Occasional Report No. 26. Fertilizer and Lime Research Centre, Massey University, Palmerston North, New Zealand. 9 pages.
- Fuller I.C.**, Reid H.E., and Brierley G.J. (2013) Methods in Geomorphology: Investigating River Channel Form. In: John F. Shroder (ed.) *Treatise on Geomorphology*, Volume 14, pp. 73-91. San Diego: Academic Press.
- Holt, K.A., Flenley, J.,** Hodgson, R., Bennett, K.D., Newnham, R. (2012) Automated pollen counting: the dream is approaching reality. In Pittari, A., and Hansen, R.J. (eds). Abstracts, Geosciences 2012 Conference, Hamilton, New Zealand, Geoscience Society of New Zealand Miscellaneous Publication 134A. p.44.
- Holt, K.A.,** Cronin, S., Moebis, A., Bebbington, M., Wilmshurst, J. (2012). Late glacial to Holocene pollen-based vegetation and temperature reconstruction from Lake Rangatauanui, Central North Island. In Pittari, A., and Hansen, R.J. (eds). Abstracts, Geosciences 2012 Conference, Hamilton, New Zealand, Geoscience Society of New Zealand Miscellaneous Publication 134A. p.34.
- Mansvelt, J.** (2012). Book Review “Spaces for Consumption. Pleasure and Placelessness in the Post-Industrial City” *Journal of Consumer Culture*, 12(3), 376-378. DOI: 10.1177/1469540512456939
- Mansvelt, J.** (March 2013). ‘Geographies of Consumption’, *Oxford Bibliographies Online: Geography*, Oxford University Press, <http://www.oxfordbibliographies.com/view/document/obo-9780199874002/obo-9780199874002-0054.xml> , Commissioned annotated bibliography with over 200 entries.
- Mansvelt, J.** (2012). Consumption, ageing and identity: New Zealander's narratives of gifting, ridding and passing on. *New Zealand Geographer*, 68 (3), 187-200. 10.1111/j.1745-7939.2012.01233.x
- Mansvelt, J.** and Zorn, T. E. (2012). The problems and possibilities for home-based elders in New Zealand. *Sites* 9(1): 107-132. <http://dx.doi.org/10.11157/sites-vol9iss1id191>
- Mansvelt, J.** (2012). Sparky Geographies: Finding the Exciting in the Mundane?, *New Zealand Geographical Society Conference 2012, Connecting Landscapes*, Wednesday 5<sup>th</sup> December, Napier War Memorial Conference Centre, 3-6 December, 2012.
- Mansvelt, J.,** Breheny, M. and Stephens, C. (2012) “‘Still being Mother’”. Identity and mothering matters in later life.’ *New Zealand Geographical Society Conference 2012, Connecting Landscapes*, Tuesday 4<sup>th</sup> December, Napier War Memorial Conference Centre, 3-6 December, 2012.
- Prince, R.**, 2012. Metaphors of policy mobility: fluid spaces of ‘creativity’ policy. *Geografiska Annaler Series B, Human Geography*, 94, 317-331.
- Richardson, J., Fuller, I.C.,** Macklin, M.G., Jones, A.F., **Holt, K.A.,** Litchfield, N.J. & Bebbington, M. (2013). Holocene river response to regional climate forcing in the Southern Hemisphere: evidence from New Zealand. *Quaternary Science Reviews*, 69, 8-27.
- Robertson, C.M.,** Brook, M.S., **Holt, K.A., Fuller, I.C.** and Benn, D.I. (2013). Calving retreat and proglacial lake growth at Hooker Glacier, Southern Alps, New Zealand. *New Zealand Geographer*, 69, 14-254.
- Robertson, C.M.,** Benn, D.I., Brook, M.S., **Fuller, I.C.** & **Holt, K.A.** (2012). Subaqueous calving margin morphology at Mueller, Hooker and Tasman Glaciers in Aoraki/Mount Cook National Park, New Zealand. *Journal of Glaciology*, 58, 1037-1046.
- Roche, M.** 2013. H Hugh Corbin at the University of Adelaide School of Forestry, 1912-1925 *Australian Journal of Forestry* 76 (1) 1-8.
- Roche, M.** 2012 ‘[Geography as ‘education for life’: Kenneth Cumberland in the New Zealand Geographer 1945–2007](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1745-7939a/homepage/kenneth_cumberland.htm)’ Virtual special Issue *New Zealand Geographer* [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1745-7939a/homepage/kenneth\\_cumberland.htm](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1745-7939a/homepage/kenneth_cumberland.htm)
- Stephens, C., Breheny, M., & **Mansvelt, J.** (2012). *Unequal Ageing: A capabilities approach to understanding inequalities among older people*. Poster presented at 26<sup>th</sup> Conference of the European Health Psychology Society, Prague, Czech Republic, August 21-25, 2012. [EHPS Poster Conference Abstract]. *PSYCHOLOGY & HEALTH* 27(sup1): 334.
- Stephens, C., Breheny, M., & **Mansvelt, J.** (2012). Measuring Living Standards of Older People Using Sen’s Capability Approach. Paper presented in symposium: New approaches to understanding the needs of vulnerable populations (Chair, Professor Paul Brown) at 12th International Congress of Behavioral Medicine ‘*Behavioral Medicine: From Basic Science to Clinical Investigation and Public Health*’ 29 August - 1 September 2012, Budapest Hilton, Hungary.
- Stephens, C., Breheny, M., & **Mansvelt, J.** (2012). Unequal Ageing: A capabilities approach to understanding inequalities among older people. Paper presented at *British Psychological Society Division of Health Psychology Annual Conference*, September 5-7, Liverpool, UK.