Welcome to the Geography Discipline Newsletter!

Message from the Discipline Coordinator...
With so much change in the world at the moment, from economic crisis in Europe, to civil war in the Middle East, to natural disaster in New Zealand, geography remains as relevant as ever. And students remain as interested as ever, with our numbers remaining strong despite the recent enrolment caps imposed by the government. Despite our own internal changes last year, we will continue to bring students the best of both natural and social science as part of a well-rounded degree. Best of luck for the year!

Dr Russell Prince

A Visitor from Vienna

Every now and again, the geography group hosts international students who come to Massey for internships or to complete research for postgraduate qualifications. The following piece is a contribution from our most recent international student visitor, Raphael Riedler.

What is the most amazing thing for a Geographer on the threshold of finishing his Masters? At this time you are still learning, exploring and finding the essence of your subject, so the best thing you can do is to get connected to the matter as deep as possible. That’s exactly what I was able to do for four months in the summer of 2011. Supported by Dr Ian Fuller, I had the opportunity to take part in a research project in cooperation with Massey University and Landcare research in New Zealand. Supervised by Dr Thomas Glade at my home University in Vienna, and of course my own intellectual contribution, this is an excellent example of the benefits to science from international cooperation.

Ah ja, if you read that far, you are probably keen to know WHAT exactly we worked on. The focus of my research stay in New Zealand was to understand the erosion patterns in the Southern Ruahines resulting from debris slides and gullying. To do this, we mapped the temporal variability of active landslides from different aerial photographs to determine their area. To ground-truth this data and to measure landslide volume and the subsurface conditions, we did what almost all Geographers love most: Fieldwork! We had fun (see picture) and got heaps of data, to play around with. As we saw later, very good and useful data to derive landslide volumes and understand the process better. And of course I did more. Feel free to ask me anytime if you are interested!

So why New Zealand? Because for me it is a fascinating country with an active and dynamic landscapes and a lot of different processes and elements I want to understand better. And that’s definitely what I achieved in my time at Massey University. To understand your country a little better, and of course, to have a lot of fun!

Using ground-penetrating radar to investigate landslide deposits on the very steep slopes of the Ruahines. From Left to right: Raphael, Dr Chris Phillips and Dr Mike Marden (Landcare Research).
Latest Exploits on the Ice!

A joint project at Franz Josef Glacier was conducted in February 2012 by Martin Brook was joined by Prof. Willi Hagg from Ludwig-Maximilians University (LMU)/Bavarian Academy of Sciences (Munich, Germany) and Dr Stefan Winkler of the Department of Geological Sciences, University of Canterbury. The project was aimed at studying the effects of debris cover on the surface melt of Franz Josef Glacier, via some neatly-contrived field experiments. It is timely, because now the glacier is in a period of recession, and down-wasting, the lower part of the glacier is now covered by rock debris. Rock debris on glaciers is important because it is axiomatic that very fine (<2mm thick) layers can enhance melt, as the darker colour of rock relative to ice causes incoming shortwave radiation to be re-emitted as longwave radiation onto the ice, melting it faster than reflective clean ice. However, with rock debris cover greater than 2mm thick, the rock can insulate the ice beneath, actually reversing the prevailing trend of melting. This causes large ridges and plateaus of debris-covered ice to be surrounded by much lower areas of rapidly melting ‘clean ice’. The team used an innovative combination of terrestrial thermogrammetry and temperature loggers, along with a climate station and stakes installed in the glacier, to determine the exact nature of the relationship between debris thickness and melt rate at Franz Josef. Terrestrial thermogrammetry involves installing a forward looking infrared (FLIR) thermal camera on a tripod, pointing down at ice covered in varying debris thickness. Temperature loggers placed in the debris at varying depths then record how temperature is advected both upward and downward from the air above to the ice-debris interface below. In the thermal image below, the debris thickness increases to the bottom left, causing warmer debris and less advection of heat downwards (and upwards). Ablation stakes drilled into the ice can also be seen.

Thermal image of the surface of Franz Josef Glacier.  Willi and Stefan at work on Franz Josef Glacier.

11th Australian and New Zealand Urban History Conference, Perth  February 2012
Conference report from Prof. Mike Roche

Perth was in the grip of a cold snap when the conference began; a mere 27 degrees which steadily rose to 35 degrees within a few days. Oddly enough given that it is the part of Australia furthest from New Zealand, it is also the city I have visited most often stretching back to the International Conference of Historical Geographers meeting in 1995. The conference gave me the opportunity to talk about some MURF funded research focussed on landscape transformation in two contrasting New Zealand domains and the curator who was instrumental in undertaking the work in both places. Over and above this I also chaired an interesting session on memorials which dovetails nicely with some work I have been doing on Anzac Day observances and which I touch on in 145.214. The conference was divided between the State Library, where by chance I bumped into the librarian who I had been in email contact with over the accessioning of the late Emeritus Professor Keith Thomson’s 50 years old Western Australian slide collection, from his time on the staff of the University of Adelaide, for the State Library’s digital images collection. The other conference venue was at the University of Western Australia where the large campus was initially developed with something of a Mediterranean style. The highpoint of the conference literally was the Lord Mayor’s reception on the 11th floor of the council building, a piece of modernist architecture, while the view was splendid, this year’s 145.214 students will be relieved to know that the direction of the sun precluded me taking any good shots of the State War memorial in Kings Park. This was however, a quick over and back trip, so that my enduring memory is of the interior of the State Library.
Dr Ian Fuller has been involved in preparing evidence for the Environment Court on behalf of Royal Forest & Bird in connection with the appeal against Meridian Energy’s Mokihinui Hydro Project. This entailed a site visit in late January which involved a fly-over of the Mokihinui Gorge and key locations in the catchment. The Hearing is scheduled for later in the year. The photo was taken during a walk-out along the Mokihinui Gorge Track. Should the MHP receive the go-ahead, the level of the resulting reservoir would extend above the bottom prominent tree line visible in the photo.

Meanwhile retired Massey Geography lecturer Dr Mike Shepherd made the front page of The Tribune newspaper recently with his efforts as co-ordinator of the Ashurst Volunteer Stoat Monitoring Group. The efforts of the monitoring group have contributed to a 20% decline in rat and stoat numbers in the Manawatu Gorge, which earned them the award in the heritage and environment category of the 2011 TrustPower Palmerston North Community Awards.
A South Island Odyssey

In a final effort to squeeze more fieldwork into the summer, Drs Ian Fuller, Kat Holt and Alastair Clement took a road trip into the deep south to recover material never before recovered by science. Reconnaissance in river catchments from the Catlins to Tuatapere as well as a foray to the other end of the Island in Golden Bay, recovered 20 samples for radiocarbon dating as part of a MURF grant awarded to Fuller and Holt to research Holocene flood histories in New Zealand. This will augment the alluvial radiocarbon database compiled by Ian with colleagues at Aberystwyth University by providing information from catchments which to date have no alluvial radiocarbon dates. No rolling stone was left unturned in the search for organics, and this run rigged up samples from a wide variety of sites, some of which were somewhere of the rainbow (see photo), but mainly by focussing our attention on bridges, though none was too far for this crew, racking up nearly 3000 km on this road trip.

Selected Recent Publications from Geography Staff and Students


