

# Mapping Mangroves

Dan Ovey



"Dan, how would you like to go to Belize and study mangroves?"

This out of the blue question from my second year tutor Richard Lucas led to probably the best two and a half weeks of my life.

Richard proposed that I headed out to Belize to study the mangrove that is abundant throughout the country, and to assess and establish the threats posed to this delicate ecosystem. Mangrove provides an important ecosystem service to Belize, in the form of coastal protection from tropical storms and hurricanes. Without mangrove cover, huge sections of Belizean coastline have the potential to be utterly devastated, and with a population that mainly inhabit the coastal areas, the retention of mangrove is of the utmost importance.

My first stop was in Punta Gorda, a small village to the south of Belize where I met up with an IGES contact at TIDE (Toledo Institute for Development and the Environment). The staff here, mainly Belizean's with a few English postgrads and senior Marine Biologists were fantastic! We were all set to head out into the mangrove, the boat was loaded, equipment packed, fuel and food packed when a call came through from the Belize Meteorological Institute warning us of a tropical storm brewing out in the Caribbean sea. The mood suddenly shifted, and all the focus was to prepare for the storm. Rangers from the outlying island stations were returned to base, solar panels removed from the roofs, electronics and scuba kit bagged and windows boarded up.

When the storm hit, we were well prepared, the wind and rain battered the coast for around 12 hours, causing minor floods and localised damage throughout Punta Gorda. However, due to the quick reactions of a lot of the villagers and townspeople, damage was relatively minimized.

A short bus ride across the lagoon separating the village from the mainland found me in the tiny village of Placencia. Here, working alongside the Southern Environmental Association (SEA) I managed to spend 4 days out in the mangrove collecting transect data,

recording species, and GPS recording locations subject to clearing and development.

The experience was fantastic, I never pictured myself 10ft in the air measuring root systems in the Caribbean as part of an undergraduate degree in Aberystwyth! Sometimes, when I was waist deep in stagnant water, with mangrove crabs crawling around in my wellies while getting soaked in one of the many sudden downpours I thought to myself '*why am I here?*'; but then I stopped, looked around me and realised where I was. How many people make it to a Belizean mangrove forest? How many people can say they have been taking dissertation measurements while hearing howler monkeys calling in the distance? Not many!



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# Bringing 'Gambo' Home

Colin Souness and Sam Doyle

*In autumn 2010, two postgraduates from IGES took low carbon emission travel to the next level, sailing from Greenland to Scotland. They crossed 1853 miles of Open Ocean in the sailing vessel 'Gambo': a support vessel to Dr Alun Hubbard's recent work on the outlet glaciers of west Greenland.*

Tattered ribbons of white sail drifted eerily past me as I watched through my diving mask, tethered to Gambo's stern railings by a long rope. Piece by piece Matt cleared the remains of the sail from the propeller. The shredded pieces of canvas hung limply in the infinite blue of the North Atlantic, bathed in dappled light from the surface as they drifted down, slowly passing out of sight into the darkness, silently beginning their long dive to the volcanic peaks of the Mid-Atlantic Ridge 1000 metres below.



Ten days previously, IGES PhD students Sam Doyle and Colin Souness and Bangor student Matt Burdekin left Greenland's capital city, Nuuk, aboard sailing vessel Gambo. Since early summer 2009 she had braved the ice-strewn inlets of west Greenland's fjords and glacier calving fronts north of Disko Bay. Now Gambo's job was done and it was time for her to return with us to the UK.

Ahead of us lay the 1,300 mile expanse of the North Atlantic Ocean. Three days passed with barely a breath of wind. Under engine alone we made about 5 knots headway against the southerly currents which carry icebergs from the east of the country where huge glaciers spew ice into the sea. We kept a constant lookout.

We travelled in company, escorted by dolphins, porpoises, Minkie whales and a Sperm whale. On the third day, the last shadowy steeples of Cape Desolation faded below the curve of the Earth and we lost sight of land. The wind began to pick up and we were soon skipping across the waves under sail alone. With the wind filling the sails Gambo heeled over on her

side, tilting our world away to starboard sometimes at only a moment's notice.

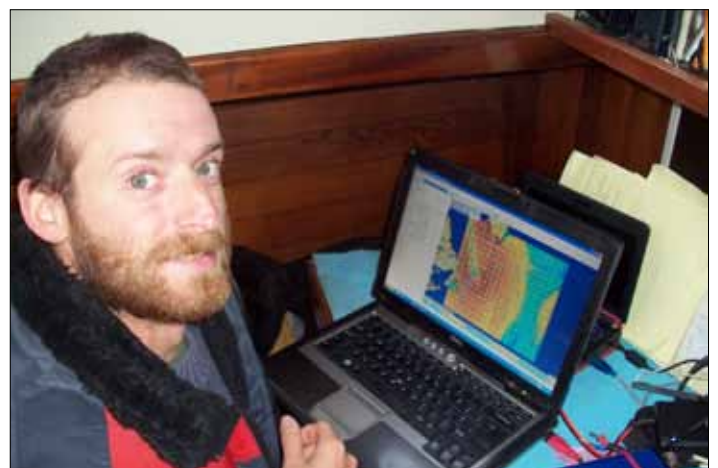
The first low-pressure system started to bear down on us almost as soon as we hit the deep waters of the Atlantic. The weather chart we downloaded via the satellite phone showed a scary, red blob carrying lots of nasty, closely packed arrows with it, indicating average winds up to and in excess of 50 knots.

22<sup>nd</sup> Sept 2010, 21:28 UTC:

*Continuous Force 8 gusting Force 9 with 10 m of swell. We disappear into huge holes. Gambo doesn't care though. She bobs along like a cork. We reefed the staysail and then the main; being occasionally plunged underwater. A squall hit us and the wind backed to the east. The blowing rain is immense – it's impossible to look into the wind. The sea is a warzone.*

When off-watch during such gales, wrapped in your increasingly moist, salty sleeping bag, bombarded by monstrous waves which occasionally catch the hull in such a way that it feels like you have just been hit by a torpedo, it was hard to sleep. Sometimes it felt like the boat was being hurled down a mountainside, complete with jolts and heart-stoppingly fierce sound effects.

In the end it was a single rope which let us down, snapping in a gale and letting the whole foresail deploy into the wind.





Despite our best efforts to bring this rogue sail in and save it from the weather the bus-sized canvas found its way into the water. Once there it quickly caught the current and was pulled onto our propeller. Within moments the canvas had wrapped itself tightly around the screw and the engine was stalled. Half way across the ocean with no foresail and a fouled prop: this was a low point.

However, a bit of ingenuity, a lot of energy and Matt's recent PADI instruction helped turn this low into a high. After some underwater excursions we found ourselves back on course. We even had a visit from a pod of Pilot Whales and a Fin Whale, obviously keen to congratulate us on getting back under way!

One week and a few mercifully less-eventful gales later, we were sailing in fine weather 200 miles west of Scotland's Outer Hebrides. We could almost smell land again. Some even deemed it time to have a wash! Eventually the horizon gave up its treasure and the first hill-shaped shadow appeared exactly where we were expecting it. It was Berneray island of the Outer Hebridean chain. That night, in the midst of one final gale, we dropped the sails and made our turn into the sound of Mull. In pitch darkness, driving winds and a mass of sea spray the view could have been better, but the sea was ours and ours alone that night.

We were home.

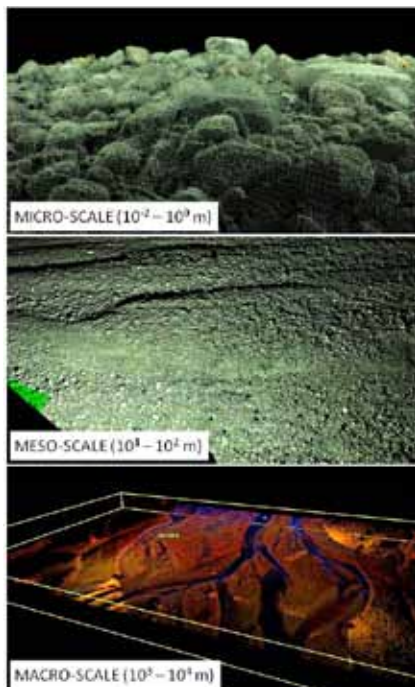




# From Grain to Floodplain: Hyperscale Models of Braided Rivers

James Brasington

The last decade has witnessed an unprecedented escalation of geospatial technology with fundamental implications for river science and management. Typical datasets of channel morphology have grown from tens of cross-sections to airborne lidar surveys incorporating millions of points. As we report here, the prospect of wide-area terrestrial laser scans with tens of billions of observations now looms large, delivering an increase of seven orders of magnitude in information in a decade. Our observational net has closed rapidly; the challenge now is to reap the scientific rewards from this technological dividend.



Scale-free topographic models linking micro-macro fluvial forms in a single dataset.

The link between river morphology and fluvial processes has long been recognized to be two-way. Topography both steers and dissipates the energy of flowing water which, at the same time, uses excess energy to erode the bed and banks and transport material before ultimately depositing lost sediment and building lost topography. The study of river properties, processes and evolution, integrates these phenomena across space, from grain-scale turbulence to reach-scale channel patterns and through time, as rivers evolve both gradually and catastrophically over seconds to millennia. Unravelling these processes has been a focus of river science for over a century.

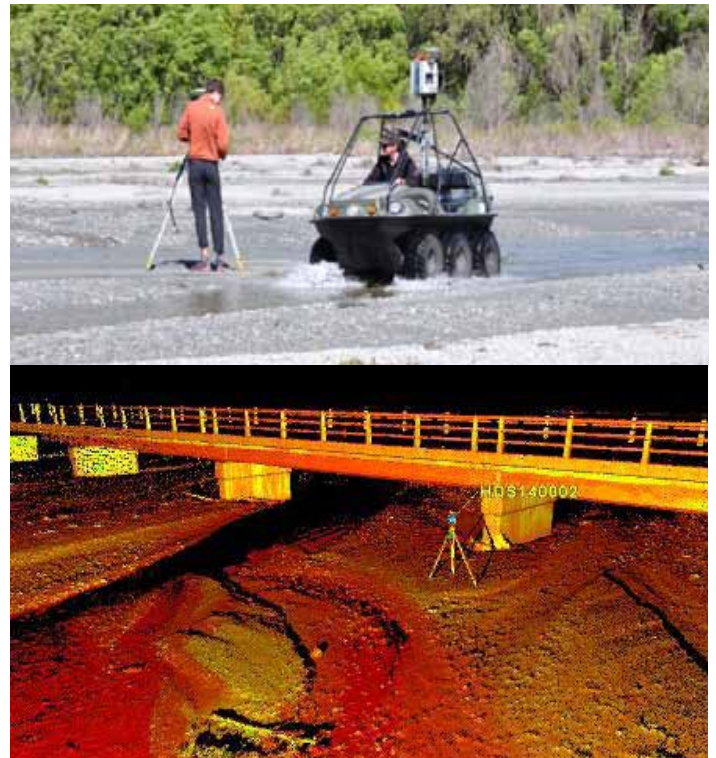
Accurate models of river channel topography and sedimentology are fundamental to this goal.

**Terrestrial laser scanning (TLS)** offers, for the first time, the prospect of landscape-scale digital-terrain models constructed seamlessly at the resolution of the fundamental particle-scale building blocks.

**The ReesScan project** began in 2009 and brings together an international team of river scientists to explore the potential of emerging remote sensing technologies to better connect the patterns of river channel change to the driving physical processes. Funded by the UK Natural Environmental Research Council and NIWA NZ, ReesScan is centred on an eight-month field campaign to study the dynamics of the intensely braided Rees River, Otago, New Zealand.

The work-engine of the project is **ArgoScan**, developed in collaboration with the Intelligent Robotics Group at Aberystwyth University. ArgoScan is a mobile river surveyor system which can be fully robotized and is capable of collecting over **one billion survey points per day**. Based on a ruggedized, amphibious, 6x6 wheel vehicle, ArgoScan incorporates a high-speed laser scanner, precision GPS, attitude sensors and a panoramic camera to capture the 3d geometry of the river on the move.

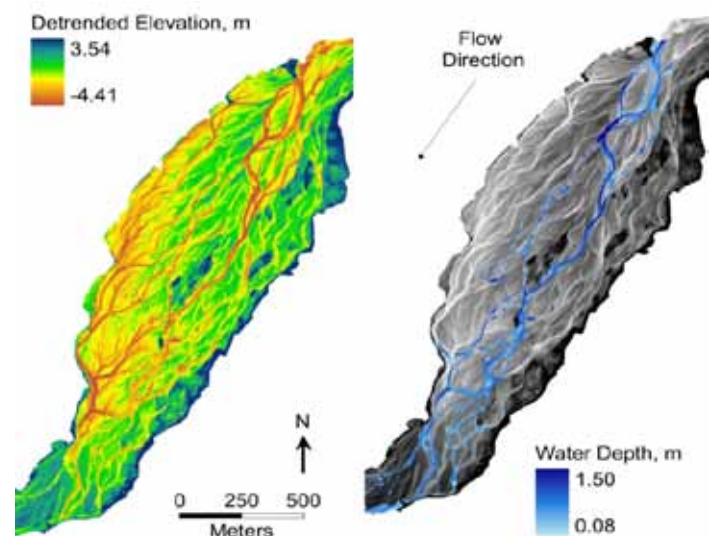
These dense survey data are supported by bathymetric observations collected from boat-based acoustic Doppler current profiling and helicopter-based aerial photography. These datasets are then fused to generate digital elevation models of river topography at unprecedented spatial resolution and precision.



ArgoScan: a mobile river surveyor.

The ReesScan field campaign ran successfully from October 2009 – May 2010 and acquired topographic models of the Rees as it was reshaped through 10 competent flood events. These varied in magnitude from 100 – 350 m<sup>3</sup>s<sup>-1</sup>, and included a 1:10 year event that caused substantial local flooding. It is hoped that this unparalleled dataset will shed new light on the geophysical processes which control the pattern of sediment transport in braided rivers.

For further information please visit the project's website: [www.reesscan.org](http://www.reesscan.org).



Digital terrain and bathymetric models of the complex, braided Rees River.



*Living for a whole semester at 78.2 degrees north is quite an experience! When we arrived in August there was 24 hour daylight, and the temperature was around 6°C. Writing at the start of November, we have seen the final sunset until February, and it's -14°C.*

# Svalbard... 78.2 degrees north

Jo Matthews, Olivia Cooke,  
Jonathan Hassal & Matthew Bradley

Four of us are studying Arctic Marine Geology, the Quaternary History of Svalbard, Pollution in the Arctic and Arctic Hydrology and Climate Change. The semester started off with a marine geology cruise to the north of Spitsbergen into Widjefjorden, scanning the sea floor and taking sediment cores along the way, and learning how to analyse them. This was followed by a quaternary history trip where we visited a number of places around western Spitsbergen on an ex-whaling ship before moving into a camp for four nights. Regular polar bear watches were required often at all hours of the morning! In hydrology we spent a few days at Kapp Linné, looking at a catchment including a glacier, lake and river as well as karst landscapes. The courses have been demanding with many new theories presented; but the test has been fun, as small classes create a friendly working environment, and with leaders in particular fields from all over the world lecturing, the experience can only be a positive one. The University Centre in Svalbard has a strong focus on fieldwork, so it's been a great opportunity to see a more practical side of Geography.

In the mean time, between studies, it's been great to get out hiking in the Arctic, alongside some kayaking, sledging, ice caving, skiing and watching the aurora borealis. You have to take a rifle with you if you're going outside the town though in case you meet a polar bear, which adds a new aspect to enjoying the outdoors!

Our final month in the Arctic promises to be a very busy one, and a cold and dark one too, but it's certainly a true arctic experience, and one which will stay with us for a long time to come!



Jonathan Hassal



Group photo at 7am after 4 hours of sea bed coring!



Wrapped up and ready to take sediment cores in the Arctic!



# Dolphins on your Doorstep

Sarah Perry

*Minke, fin, common, killer, humpback, bottlenose and risso: these are some of the cetacean species (whales, dolphins and porpoises) that regularly visit our waters throughout the year.*

When I first came to live in Wales, I didn't realise how many different cetacean species had been recorded in Welsh waters. There's no need to travel around the world to catch a glimpse of a whale or dolphin when they are practically on your doorstep! I can almost guarantee that if you are patient you will be lucky enough to spot a bottlenose dolphin in the waters around Aberystwyth.

I am fortunate enough to have worked and lived in New Quay for the last seven years, where sightings of bottlenose dolphins occur almost daily from May to November. Welsh waters support a diverse range of marine habitats and species. There are a number of designations designed to protect these species: one of the reasons why part of Cardigan Bay was designated a Special Area of Conservation (SAC) was to help protect the bottlenose dolphin population.

However, relatively little is known about the bottlenose dolphins and other cetacean species that frequent our waters. Cardigan Bay is considered to be one of the most important sites for bottlenose dolphins in UK waters. Further offshore, deeper waters and upwellings appear to provide important feeding grounds. The protection of Cardigan Bay and lack of industrial pollution and ship movement may also explain why the area is favoured for breeding. Other more unusual marine species also frequent Cardigan Bay. Every year, for example, there are sightings of leatherback turtles as they migrate from more tropical waters in search of their favourite food, the barrel jellyfish.



Protection under the Habitats Directives and Ramsar Convention brings with it a duty to the government to maintain these populations in favourable conservation status. For this to be measured, species need to be monitored. The majority of monitoring studies rely on the use of vessels, land based vantage points and volunteers. Survey coverage is limited because of the nature of these methods.

For a number of years, I have been involved in studies on the bottlenose dolphins. I am excited that I now have the opportunity to expand that research through my PhD at IGES which aims to investigate the use of remote sensing technology for monitoring large marine species population distributions over whole sea areas, identifying key areas of marine species habitat and providing information which would ultimately influence decisions relating to the conservation and protection of these enigmatic creatures.

The large marine species that frequent our waters depend on different marine resources and habitats. Knowing which areas are important for these animals and how they are faring in our waters will help provide us with an indication of how healthy our seas are and help us protect these for future generations.





# YES – Year in Employment Scheme

Rebecca Baker,  
Environmental Science student

*During the academic year 2009/2010 I was working on a YES placement with Herefordshire Council. Volunteering at my Local Authority provided me with fantastic experience in the workplace and gave me satisfaction working in my local area.*

During my 9 months at the council I took part in several projects in the Sustainability and Biodiversity departments. I calculated the carbon emissions for Herefordshire from Government data and completed a report which was shown to the local planners and governors. This was then used as the basis in their plans to meet the National Government targets to lower CO<sub>2</sub> emissions.

I also had the opportunity to be involved in a woodpecker conservation project working with top people in the woodpecker business! I was involved in training days for local volunteers who were interested in recording woodpecker sightings. We also created a number of woodpecker boxes from a design created by a local birdwatcher and these were monitored throughout the breeding season.

Overall it was a fantastic experience and I would encourage anyone who is considering it to go ahead! I now have lots of valuable experience to put on my CV, I was able to put some things I learnt into practice, I learnt new skills and I made a whole new group of friends.



Woodpecker project co-ordinator and I monitoring woodpecker nest boxes  
©E. Bowen-Jones

# Geography Ambassador Scheme

Frances Dixon, 2<sup>nd</sup> year IGES Geography student

In my first year studying Geography at IGES, I was offered the opportunity to become a 'Geography Ambassador' through the Royal Geographical Society. Ambassadors are undergraduate and graduate geographers who go out into schools as volunteers to deliver engaging sessions on the relevance of geography and what geography has to offer for progression and careers. To become an ambassador we were required to attend an afternoon training session hosted by an RGS trainer in which we learnt vital presentation skills and ice breaker techniques.

We received lots of free goodies; once we had arranged a visit we received a 'SuperGeog' T-shirt and 'I ♥ Geography' pencils to give out to students. We were also informed we would receive a free RGS Geography Ambassadors hoody after we had done three visits!

*It was an enjoyable day and I received positive feedback from the teachers. It felt great being able to talk to pupils about something I was passionate about and feel confident in doing so!*

I took the opportunity to visit my old secondary school and spent the day talking to different geography classes from year 7 up to year 13. It was an enjoyable day and I received positive feedback from the teachers. It felt great being able to talk to pupils about something I was passionate about and feel confident in doing so! Being a Geography Ambassador is an effective way to develop your transferable skills; it boosts your confidence in public speaking, improves presentation skills and you learn how to interact with a large audience. All travel costs are reimbursed so it doesn't cost you a thing and it's a great way to enhance you CV!

For more information visit [www.rgs.org](http://www.rgs.org) and search 'Geography Ambassador'.







## Trapped in Paradise!

*Every spring IGES students spread out to all corners of the world on our second year field trips.*

In spring 2010, the eruption of the Eyjafjallajökull volcano in Iceland resulted in the closure of airspace over many parts of Europe. Many of our students and staff were trapped on field-courses and this included IGES's own volcano expert! Fortunately for our students on the New Zealand field courses, sitting on a beach or studying a glacier proved to be a most effective way of waiting for the disruption to pass.

The New York trip was not so lucky: several students and staff were already in the USA after some pre-field work travelling. The rest were grounded in the UK. The whole Crete cohort had their flight cancelled, scheduled just hours after the disruption began. Meanwhile, the students on the Ireland trips enjoyed a restriction-free ferry crossing!

Fortunately the story has a happy ending. Both our Crete and New York field courses ran again in October 2010, and the New Zealand students were most disappointed to see the ban lifted in time for them to return home!



# The W J Edwards Award

Bill Edwards (1944-2007) was passionately interested in Wales—particularly in community, politics and participation. He was also fascinated by the links between Geography and other disciplines such as Art, History and Literature, as well as the social and physical sciences. As Director of Teaching in IGES and as Dean of Arts, he made a great contribution to improving the experience of students in Aberystwyth. Honouring Bill's love of Wales and his commitment to supporting the academic and personal development of our students, this award is designed to support dissertation or Joint Honours project work which contributes to our understanding of any aspect of the physical and /or human environment of Wales. In 2010, we were pleased to present the award to Kimberley Cartwright (BSc Physical Geography). Here, she reports back on her research experiences over the summer.



Bill Edwards (1944-2007)

## Kimberley Cartwright Year 3, BSc Physical Geography



The Copper Mine at Parys Mountain

The aim of my research was to study "The impacts of a derelict copper mine, Parys Mountain, Anglesey on the water quality of two rivers, Afon Goch Amlwch and Afon Goch Dulas." My project focuses on whether the

water quality in these rivers meets with UK regulatory standards and if not, what can be done to improve the situation?

There is a long history of metal mining in Wales, which has led to ongoing pollution problems. At Parys Mountain highly contaminated water originating in precipitation pits from this extensive mining complex is draining into two local rivers. In 2003 the water being held by a dam at Parys Mountain was drained as it was seen as unstable and a threat to the local town of Amlwch. When this occurred it improved the water quality within the Afon Goch Dulas. Unipure previously undertook trial runs on improving the environmental contamination at the mine but to date little seems to have been done on improving the water quality within the Afon Goch Amlwch.

This fantastic award has enabled me to have ample time and resources to collect all the information needed to achieve a substantial data set for further analysis.

The Afon Goch Dulas has very little heavy metal contamination with only magnesium being found in reasonably high concentrations. However, in the Afon Goch Amlwch the concentration of copper, zinc and iron is high, but the concentration of magnesium is startlingly high. Research at Manchester University suggests that the Afon Goch alone contributes substantially more pollution than the combined loading from the six largest rivers in North Wales and North West England whose waters flow into the Irish Sea. The water quality within the Afon Goch Amlwch therefore needs to be improved significantly to reduce both local pollution problems and wider contamination in the Irish Sea. My next area of research is studying how the situation can be improved.

# Fieldwork and Fondues

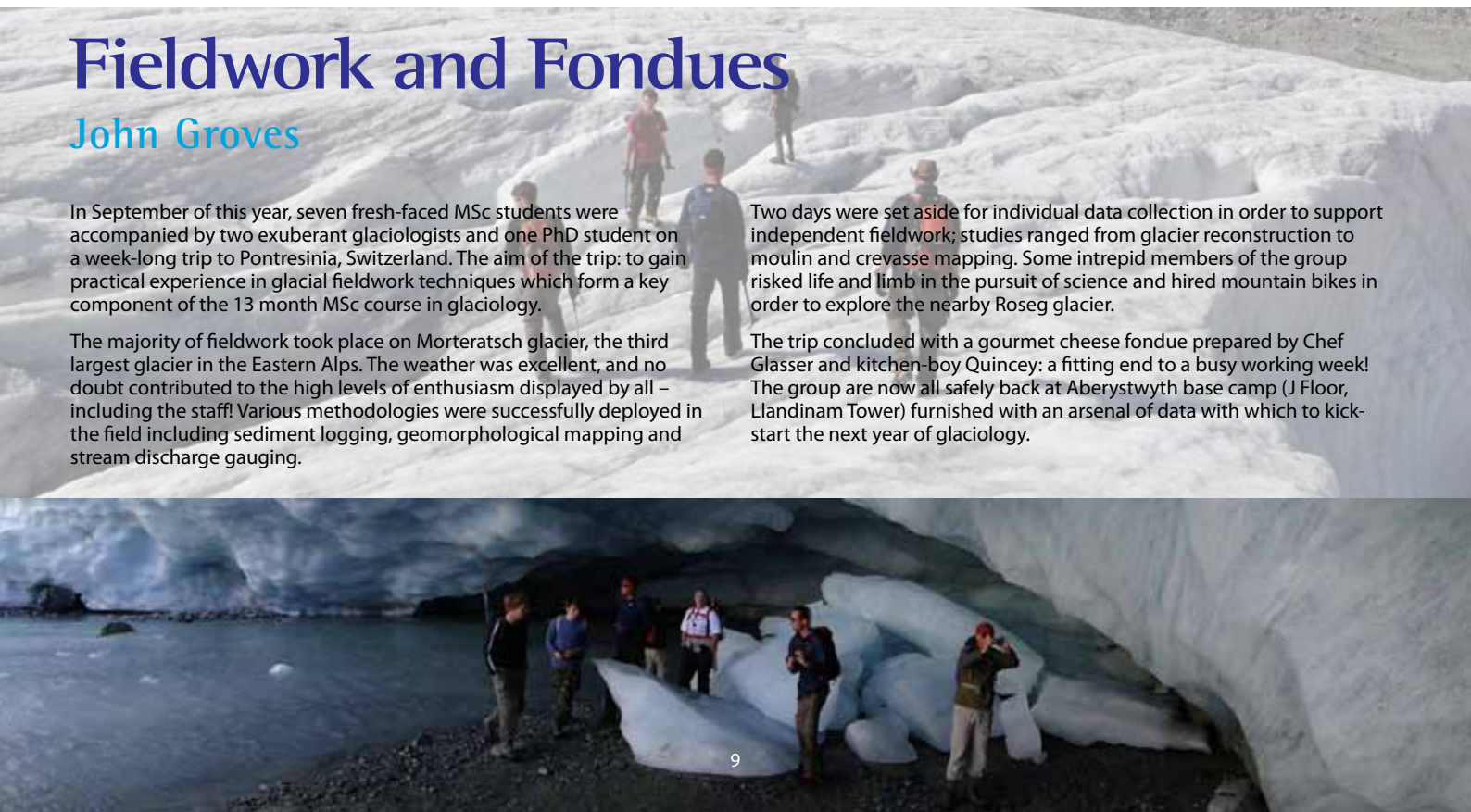
## John Groves

In September of this year, seven fresh-faced MSc students were accompanied by two exuberant glaciologists and one PhD student on a week-long trip to Pontresina, Switzerland. The aim of the trip: to gain practical experience in glacial fieldwork techniques which form a key component of the 13 month MSc course in glaciology.

The majority of fieldwork took place on Morteratsch glacier, the third largest glacier in the Eastern Alps. The weather was excellent, and no doubt contributed to the high levels of enthusiasm displayed by all – including the staff! Various methodologies were successfully deployed in the field including sediment logging, geomorphological mapping and stream discharge gauging.

Two days were set aside for individual data collection in order to support independent fieldwork; studies ranged from glacier reconstruction to moulin and crevasse mapping. Some intrepid members of the group risked life and limb in the pursuit of science and hired mountain bikes in order to explore the nearby Roseg glacier.

The trip concluded with a gourmet cheese fondue prepared by Chef Glasser and kitchen-boy Quincey: a fitting end to a busy working week! The group are now all safely back at Aberystwyth base camp (J Floor, Llandinam Tower) furnished with an arsenal of data with which to kick-start the next year of glaciology.





# Three years in Aberystwyth? Priceless!

Nicholas Reeves

*Like the famous Mastercard adverts – night out in Aber £20, field trip to New York - £500, annual tuition fees - £3000, the time I had in IGES as an undergraduate can only be described as priceless.*



Three years ago, I was this excited young undergraduate starting out at Aber. Three years later and with a BA (Hons) in Human Geography to my name, I am now studying for an MA in Space, Place and Politics because of the fantastic time I spent in IGES.

To describe my time as an IGES undergraduate as brilliant would be an understatement, as much as I enjoyed my time studying, the true high point of all this was the time I had in New York on the second year fieldtrip. One day, I was in a lecture on social exclusion with Dr Chris Bear and then two days later, I was stood in the middle of Times Square taking in the atmosphere and sights and having a fabulous time. Only at IGES could this be possible. Despite the hard work of the trip, we still (somehow) found the time to visit some of the many famous sights New York has to offer and at the end of it all, enjoy a few drinks with the staff.

There were the obligatory lectures of course, from Professor Alex Maltman's rantings on mineral water being a shameless con and Dr Bryn Hubbard's 'lecture hall tennis' in my first year, to Professor Matt Hannah's talks on architecture and power relations. But in the end the education, guidance and support I have been provided by staff (who were always there for me when I needed them and who genuinely cared about me) really has been second-to-none, for which I am ever thankful.





# Reggae, taxis and hurricanes

## Disaster preparedness in Jamaica

Alison Davies

Flying over the atolls of the Caribbean into the glowing sunset, I was heading for five weeks in the laid-back land of beaches, coral reefs and reggae. A whirlwind drive westwards out of Kingston brought me to the quiet coastal town of Black River, narrowly avoiding potholes, goats and people while blasting the reggae songs which were to become the soundtrack to my trip.

After the first of many breakfasts of spicy jerk fish and dumplings, I made my 500m commute along the beach to the Disaster Preparedness Office of St Elizabeth Parish Council where I would be volunteering.

Work could involve almost anything – I travelled halfway across the island to give a natural hazards talk to 150 summer camp students, attended a Parish Council meeting, attempted to herd stray goats away from the mayor's car, and spent a day trying to find enough bandages to teach a group of fishermen first aid. In true Jamaican style, when we arrived to give the first aid course on the appointed day, the fishermen had gone to sea and would be back 'soon'. I rapidly learned that the frequently used phrase 'soon come' meant precisely the opposite: that delayed people, food and events were unlikely to arrive for the foreseeable future.

The most interesting parts of my working day were my dissertation research interviews. I investigated links between risk perception and preparedness for hurricanes, speaking to local people, council officials and a group of firemen. I heard accounts of events during previous hurricanes, and came to a better understanding of how and why people choose to prepare for hurricanes.

Weekends were filled with trips all over the island, to mountains, beaches and waterfalls with the other volunteers, fuelled by the local Blue Mountain coffee. Most of the fun tended to be getting to places – Jamaica's route taxi system meant that taxis left when full. It soon became clear that 'full' meant a minimum of 6 people in a five seat car, including additional luggage. Particularly memorable occasions involved sharing the back seat with a wide screen TV, or the entire front bumper of a car – and three other people.

I had so many unforgettable experiences in Jamaica, in sunshine, lightning storms and by moonlight, but always with Jamaica's steady heartbeat of reggae in the background.

My placement was organised by Projects Abroad, an international volunteer organisation ([www.projects-abroad.co.uk](http://www.projects-abroad.co.uk)).





# GRADUATE BIOGRAPHIES

You've worked hard and played hard for three years, and that degree is securely in your pocket, **but what do you do next?**

Here are some of our recent graduates to show you just what you can do with a degree in Geography!

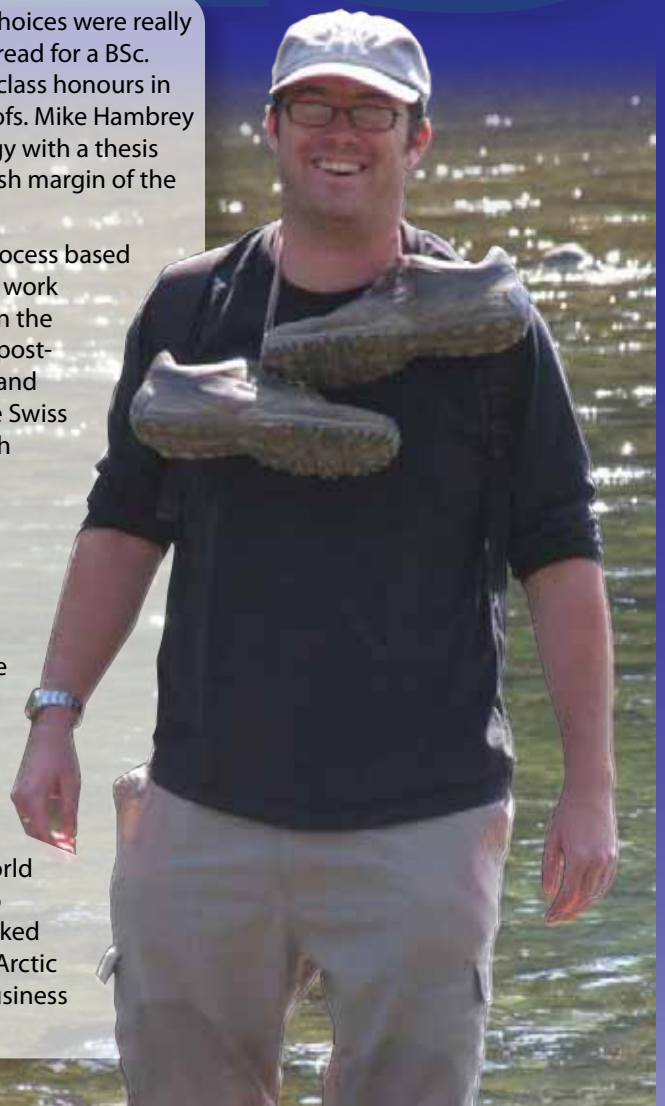
## DR JAMES ETIENNE

now works for  
NEFTEX PETROLEUM CONSULTANTS,  
*Geologist*

Having always wanted to be a geologist, my higher degree choices were really quite easy, and when I visited Aber it was love at first sight. I read for a BSc in Geology in IGES, starting in 1997 and graduating with 1st class honours in 2000. I remained in Aber, where, under the supervision of Profs. Mike Hambrey and Neil Glasser, I completed a Ph.D. on glacial sedimentology with a thesis entitled 'Quaternary glacial sedimentation along the Welsh margin of the Irish Sea basin.'

With a combined knowledge of the geological record and process based glacial sedimentology, I found myself in a unique position to work on a hot research topic. Four days after completing my viva in the summer of 2004, I flew off to Switzerland to start a two-year post-doc on the 'Snowball Earth' with renowned sedimentologist and basin analyst Philip Allen. Over the course of two years at the Swiss Federal Institute of Technology in Zurich I undertook research on ancient glacial rocks in the Lesser Himalaya in northwest India and the Sultanate of Oman. I also had opportunities to see incredible sections in Death Valley, California and revisit equivalent rocks in northwest Scotland. This research was undertaken to try and test the controversial theory that the Earth froze over during the latest part of the Neoproterozoic (~635 Ma), a phenomenon known as the 'Snowball Earth.' The project culminated in the organization of an international conference held in southern Switzerland in summer 2006, attracting delegates from over 15 countries worldwide.

Following the end of the conference, I returned to the UK, marrying the girl I met 8 years earlier as an undergrad in Aber! I now work for Neftex Petroleum Consultants Ltd., a world leader in the provision of sequence stratigraphic solutions to the oil industry. Over the past few months, our team has worked extensively on the geology of the entire North America and Arctic region, including analogue field excursions in Europe and business meetings across North America and Canada.





University life was like a rollercoaster (fast and fun but had its ups and downs). In my first year I was adamant that I was going to be a Physical Geographer, but through much deliberation I realised that I was intrigued with cultural and emotional geographies and best suited to Human Geography. Second year, I decided to go to Brazil and do some volunteering (a turning point for the way I saw geography and people).

Once graduated, I wasn't sure if I should do a MA (as my friends were doing one) or get a job. Anyway I took a year out and did a variety of jobs to get me by. I wanted a job that would offer diversity, variety and was exciting and was not completely office based. I saw this job, Youth Volunteer Adviser, 22 hours a week for 9 months (plenty of time to travel.)

So, 8 months on and my contract has been renewed for another year and I am now full time, but most of all I love it!! I get to work with people of all ages (mainly 16-25s), travel around Wales and see the hidden beauties of Ceredigion. I spend little time in the office as I cover the whole county, engaging and encouraging young people from all backgrounds to get into volunteering as a way of developing and gaining new skills.

Each day is completely different; Never knowing what is going to happen makes the job exciting and keeps me on my toes. My weeks can range from training to visiting a wildlife reserve in Newquay. I have been working with organisations to encourage and engage young people in volunteering such as the URDD, Disability Sports and smaller charities in towns such as Hafal, and Oxfam. I also work closely with Ceredigion County Council on topics surrounding young people. I also have strong networks now with the Youth Service and Dyfed Powys Police.

I also volunteer on youth sub groups with Communities First, help the Local Police hold discos for young people and I am also helping to develop a youth forum.

The skills and knowledge that I developed and gained through my degree help me enormously each day. I've carry out a variety of research and completed many reports, used my presentation skills and am constantly working as a team. (I have also used the Dictionary of Human Geography and Practising Human Geography book!).

The best advice I could give when using your degree is to think outside the box. Don't be afraid to try something different. Look at your skills and passions, go for a job you can identify with and you will be amazed how you will use your degree.

**LAURA RICH**  
YOUTH  
VOLUNTEERING  
ADVISOR



**PHIL EMONSON**  
now works for  
JBA CONSULTING,  
*Flood Risk Analyst*



Since leaving Aberystwyth in October 2006 I have started work with JBA Consulting, an environmental consultancy firm with a particular specialism in environmental, hydrological and hydraulic analysis. I joined as an Assistant Analyst in the Flood Studies and Emergency Planning Division. I have been actively involved on a number of projects including Flood Risk Assessments for commercial and residential developments, catchment-wide flood risk mapping studies in conjunction with the Environment Agency and a Flood Emergency Planning Exercise.

I have been involved in a Catchment Flood Management Plan, for which I was required to produce a catchment wide hydraulic model from which damage calculations were determined for the affected properties. This study focussed on issues influencing catchment dynamics such as land use management and environmental change. I have also written hydrological analysis reports for Environment Agency projects and submitted Flood Risk Assessment reports to commercial clients. I have worked on projects in Central London, the Midlands and Anglian regions, South Wales and Ireland.

My four years at IGES provided me with the theoretical background to understand many of the concepts involved in catchment management and dynamics. I feel that the Geomorphological Approaches to River Basin Management module on the MSc was especially useful. The coverage of the relevant policies and legislation (such as PPG25 and the WFD) on the MSc was also of great benefit. The work I undertake on a daily basis involves application of the technical skills I developed in undergraduate modules, such as GIS and river modelling.





***"As Geographers... travel is a fundamental part of education and I thank the Gareth Thomas Travel Award to helping me do this."***

Lawrence Wood,  
3<sup>rd</sup> Year BSc Geography

Bethan Ford and Heather Rowe volunteered in Rio de Janeiro, James Hickman went diving in the Farne Islands and Katie Small explored Salzburg and Munich. Lawrence Wood discovered China, Richard Woodhouse trekked 200 miles across Namibia and Shannon Kimber and Michael Wood volunteered with the Native Forest Foundation in Sri Lanka. Teve Kink travelled to the Spanish enclaves Ceuta and Melilla in North Africa, and Ben Robson encountered Bulgaria.

Each year we offer up to 13 travel awards, worth up to £400, to students looking to explore the world. Here are just some of the stories from those who made it back!

# IGES TRAVEL AWARDS 2010

## HEATHER ROWE AND BETHAN FORD IN RIO DE JANEIRO, BRAZIL 2<sup>ND</sup> YEAR BSC GEOGRAPHY

Bethan and I spent two weeks in Brazil in the summer of 2010. We spent most of our time in Rio de Janeiro living and volunteering at a day-care centre in Rocinha favela. This gave us a great chance to experience the everyday lives of these people and was even more exciting as our visit coincided with the World Cup.

We saw many of Rio's most famous sites, such as Christ the Redeemer, Sugarloaf mountain and the Sambadrome. As well as this we had the chance to visit the amazing Iguasu waterfalls on the border of Brazil and Argentina.

The whole trip was hugely inspiring, from the hard life, but friendly attitude, of those we met in the favela, to the beauty and might of the waterfalls.



## KATIE SMALL IN SALZBURG AND MUNICH, GERMANY 3<sup>RD</sup> YEAR BSC GEOGRAPHY

I used the travel award to visit Salzburg and Munich. I really wanted to see a different part of the world and have always been interested in the German culture. The trip was amazing and really helped to improve my knowledge of the German language.

Salzburg is a small city with many of the attractions located in the old city, which meant we managed to see a large proportion of the city in just one day. For me one of the highlights was visiting the city's fortress, which sits high above the city giving incredible views of all of Salzburg. Another highlight were the Catacombs in St Peters Graveyard. Hellbrunn Palace was a magical place to visit with the trick fountains and the stunning gardens. The Sound of Music Tour was definitely worth it. The tour took us to places we wouldn't have normally seen, and therefore I managed to see the amazing scenery of the Bavarian alps and many traditional Austrian towns.

From Salzburg we got the Train to Munich. Munich was a fantastic city. It was vibrant and full of atmosphere and had an interesting array of architecture. However, I think from a tourist's point of view there are actually few sights to see. It was an excellent base to visit the Neuschwanstien Castle which took 3 hours to get there but it was very interesting to see, as this is the castle which the Disney castle is based on. For me the highlights were the Hofbrauhaus and the huge beer garden.

These places were bustling at all times and a great communal meeting place. The English Gardens were also well worth a visit, and were great to spend an afternoon wandering through.

Germany has a big food and beer culture and one of my favourite aspects on this trip was experiencing this! I really enjoyed sampling all the unusual foods such as pancake soup and the vast variety of beers!



View of Salzburg from the fortress



Neuschwanstien Castle on which the Disney castle is based



We took the cable car up to the 1853m summit of the Untersberg



Hellbrunn Palace gardens





## JAMES HICKMAN, FARNE ISLAND DIVING EXPEDITION 2ND YEAR BSC PHYSICAL GEOGRAPHY

I received £50 from the IGES Gareth Thomas Travel Grant which I used to fund a diving expedition to the Farne Islands in Northumberland.

The main aims of the expedition were to investigate a possible dissertation theme/site and to enjoy the wonderful and unique diving that is to be had in the area.



Velvet Swimming Crab (*Necora puber*)

## RICHARD WOODHOUSE IN NAMIBIA 3RD YEAR BSC PHYSICAL GEOGRAPHY

In March 2010 I trekked 200 miles across the barren Namibian Desert in aid of the charity Action Medical Research. It was a truly incredible experience in which I learned a great deal and gained a huge respect for such a harsh environment, the animals that thrive there and the people who spend their lives protecting such a unique place.



Camp (resembling something akin to a scene from M.A.S.H) was set up each night by the local guide crew who also provided the much appreciated evening meals. I still have no idea how they managed to serve barbequed fish for dinner 5 days into the trek and 100 miles from the nearest water source.

Myself and the local "Team Giraffe" guide Augi, one of the most incredible people I have ever met. After 26 years of living in the Namib desert he was able to reproduce the sound of every animal we came across. His animal tracking skills would even put Ray Mears to shame.



The Namibian sunrises and sunsets were some of the most spectacular I have ever seen. Forgoing the use of the tents provided, I decided to sleep under the stars every night. The Namibian night sky, with no light pollution to speak of was undoubtedly one of the most incredible sights I have ever seen. A truly unforgettable experience.

Brandberg "The Burning Mountain", the highest point in Namibia, overshadowed our entire trip with its dominating 40km wide silhouette. It was formed as an igneous plug to a vast prehistoric volcanic system that once dominated the landscape. It was starkly contrasted with the rest of the mountains that were clearly sedimentary in origin with profiles strongly resembling the Grand Canyon.



"Team Giraffe". The entire group was split up into three smaller teams to make our presence less obvious and to increase our chances of encountering the larger wild animals including giraffe, rhino, zebra, oryx and ostrich.



## LAWRENCE WOOD IN CHINA 3RD YEAR BSC GEOGRAPHY



Using the Gareth Thomas Travel Award, I was able to take my second visit to China, visiting everything I missed first time round! I travelled mainly along the Eastern seaboard, visiting Jiuhuashan, Xian, Wuhan, Shijiazhuang, Beijing and finally Shanghai.

My trip to China was an amazing experience and has provided me with

not just a life experience but a vital part of my education. The lecture theatre where we learn our theory is useless unless we can take those ideas out into the real world. The study of a different culture has been a major impact on my dissertation and crops up in many aspects of my degree. As Geographers, I think travel is a fundamental part of education and I thank the Gareth Thomas Travel award for helping me do this.



1) Shanghai – visited the historic bund, among other things, as well as conversing with a large amount of Chinese students eager to practise their English.

2) Jiuhuashan – One of the seven holy mountains of Buddhism. I stayed in the Buddhist equivalent of a nunnery for less than a pound a night, and ate meals with the monks. I was woken at dawn everyday by the chants, and climbed the mountain itself as well as several nearby peaks.

3) Wuhan – Think Arriva Trains Wales is bad? Try a train in China. The most popular and economical form of transport, every train is full beyond capacity, with many people having 'standing tickets' for journeys lasting over 12 hours.

4) Xian – The old capital of China during the Tang dynasty, Xian is a rapidly growing industrial city. The old city walls have recently been restored and I joined many by renting a bike and cycling the 14km around the city. I also saw the fabled 'terracotta warriors', the clay statues that were a dead kings legacy. The warriors, horses, wagons, servants and nobles were supposed to become real in the next world, ensuring the king a comfortable afterlife.

5) Shijiazhuang – This is the centre of China's massive pharmaceutical industry. There isn't much here for most people, however for a taste of modern Chinese night life this cannot be beaten. I spent several days there, befriended a local, ate with him and his friends, experienced KTV (karaoke, but in a BIG way) and got a taste of the up and coming clubbing scene.

6) Beijing – Amazed at the extent of capitalism in 'communist' China. Also saw the forbidden city (its not forbidden anymore, at least if you pay), Tiananmen Square, and counted over a thousand people queuing to see the resting place of China's most famous/notorious politician, Chairman Mao.







## SHANNON KIMBER AND MICHAEL DRAY IN SRI LANKA 3RD YEAR BSc PHYSICAL GEOGRAPHY & GEOGRAPHY

We applied for the Gareth Thomas Travel Award 2010 in order to go to Sri Lanka and volunteer with the Native Forest Foundation. The project involved teaching

children the importance of biodiversity, and the conservation of medicinal and wild-fruit plants. We stayed with a family in Gampaha, 25km north-east of the capital, Colombo. During our time there, we visited local Sunday Schools and Buddhist Monasteries, to assist the teaching programme and help plant a range of tree species.

Working with the project had many academic benefits. We learnt about the impact of urbanisation on land fragmentation. Also, how more profitable plants, such as banana and coconut, were favoured as commercial plants, and how it has reduced species biodiversity in Sri Lanka. The head of the project, Damitha, was keen to enthuse children about native biodiversity and encouraged them to adopt traditional usage of the plants. For example, the bark of one tree was used by Sri Lankan ancestors to clean their teeth. Another was planted in paddy fields to attract feeding bats, who in turn would leave their droppings which acted as an effective fertiliser for the paddy.

In our spare time we travelled all around the country. We went to the dry plains of the 'cultural triangle' in the north, and visited the ancient cities of Sigiriya and Dambulla. We also spent many days travelling on trains throughout the hill country, where we were able to see miles upon miles of tea plantations. The town of Nuwara Eliya (Little England) was once a hub of British colonial activity, and a major centre for British civil servants and planters in Ceylon. This area well displays the impact of colonialism. Many of the buildings are still of the colonial period and the surrounding countryside is still used to grow vegetables typical of temperate Europe: potatoes, leeks and carrots. One week we travelled south to the Dutch fort of Galle, and along the way saw the devastating impact of the 2004 Tsunami and the miles of improvised housing constructed in its wake.

On our visit we were keen to learn about Buddhist culture. We were lucky enough to be able to visit a sacred pilgrimage site on the Poson Poya holiday, a day celebrating the introduction of Buddhism to Sri Lanka. We also visited the Pinnawala Elephant Orphanage, home to the largest herd of captive elephants in the world. The orphanage was created to offer care and protection to orphaned elephants found in the jungle and now acts as a key breeding ground. One of our most spectacular experiences was visiting the Sinharaja Forest Reserve, which was named a UNESCO World Heritage Site in 1988. The area is also a Biosphere Reserve and home to a large proportion of the island's endemic species, including trees, insects, birds and amphibians. It was an amazing experience working with the programme. We learnt a great deal whilst we were out there and are still in regular contact with its members.



## BEN ROBSON IN BULGARIA 3RD YEAR BSc GEOGRAPHY



We travelled around Bulgaria for just over two weeks. I had preconceptions of a country full of communist era housing and dilapidation. This for the large part was not true, especially in the more rural areas.

Sofia is the capital of Bulgaria and from wandering around the city you got the sense that Sofia is very much trying to distance itself from its dark communist days. In one of the central parks we found a statue of *Lenin* that had been pulled down and left in the corner. Sofia is a nice city but after a few days we were ready to move on so we caught the *Burgas Express*, an eight hour train ride through sunflower filled plains. A short bus ride from Burgas took us to Sinemorets. Bansko was our last stop before we flew home from Sofia. Deep into the Pirin mountains Bansko is a popular skiing resort, but during summer we enjoyed fantastic walks in the mountains, went horse riding from a local farm, and biked down from a mountain



after catching the chair lift up. The town, which apparently is heaving in winter, was very quiet. Old Bulgarian women dressed with black headscarfs could often be seen sat outside their houses and they would give a friendly *doberden* as we walked past.



Two weeks is not long enough to see such an incredible country. At each place we stopped we would hear stories of ancient towns, nature reserves or activities that were possible to visit in the surrounding areas. I shall definitely be returning to Bulgaria!

## TEVE KINK IN SPANISH AFRICA 3RD YEAR BA HUMAN GEOGRAPHY

Thanks to the Gareth Thomas Travel Award 2010 I could more easily realise my travel to the Spanish enclaves Ceuta and Melilla in North Africa. Both autonomous cities belong to Spain and are therefore parts of European Union. The cities represent the most Southern part of the 'Fortest Europe' and are surrounded by border fences to stop smuggling and illegal immigrants coming to Europe. The culture is very diverse in those enclaves, being represented by four religions: Christians, Jews, Muslims and Hindus. It was interesting to see the contrast of these two countries, both economically and culturally, and how the borders of Europe are influencing peoples lives.



*Ceuta has been a Spanish enclave since the 17th century and its territory is ~20sq km with a population of ~75000 inhabitants. Melilla has belonged to Spain since the 15th century and its territory is ~13sq km with a population of ~65000 inhabitants. Spanish enclaves Ceuta and Melilla are both parts of the European Union, however they are located in the African continent.*



*The border fence goes deep into the sea dividing two countries - on the left is Morocco and the right is Spain (Melilla). The fences are 6m high, with radar and day/night vision security cameras, detection wires, tear gas diffusion systems, and military and police control on both sides.*



*The culture in enclaves is very diverse, with the Spanish Feria and Muslim Ramadan taking place every year.*



*Every day thousands of people queue to enter temporarily into the Spanish enclaves Ceuta and Melilla.*



# Ashram in Ahmedabad

Julie Durcan



Julie Durcan attended the 2<sup>nd</sup> Asia Pacific Luminescence and Electron Spin Resonance Dating Conference hosted by the Physical Research Laboratory, Ahmedabad, India. Julie presented her work on the optically stimulated luminescence (OSL) dating of river palaeochannels in Pakistan to scientists from around the world and received positive feedback and suggestions for further avenues of study. The program included many prominent speakers (including Professor Geoff Duller and Professor Ann Wintle from the IGES), as well as a wide variety of talks ranging from the luminescence dating of Himalayan rivers, and the thermoluminescence of meteorites, to the spectroscopy of diamonds.

As part of the conference, a one-day field excursion was planned to see sites in the Mahi river basin. Sedimentary sequences at these sites have enabled the reconstruction of monsoon dynamics over the past 130,000 years, with many study sites utilising the luminescence dating technique to contribute to this chronology. There was also the opportunity to consider matters beyond science during a visit to the Gandhi Ashram on the banks of the river Sabarmati – the home of Gandhi after his return to India from South Africa after World War I. Now a museum, it contains many relics from Gandhi's life, including his writing desk, and acts to preserve the stories of the historic events of his life.

Julie received funding from the Aberystwyth University Faculty of Science, the British Geomorphological Society and the Quaternary Research Association, which made attendance at this conference possible.





# “さようなら桜島 Sayoonara Sakurajima こんにちは九州 Konnichiwa Kyushu”

Nick Pearce



*In May, I attended the International Field Conference and Workshop on Tephrochronology held in Kirishima City, southern Japan. The meeting, “Active Tephra in Kyushu” was organised by the “International focus group on Tephrochronology and Volcanism” (INTAV) within INQUA (the “International Quaternary Association”).*

*An eruption of Sakurajima, Kyushu, in May 2010.*

These meetings are held about every 4 years and are a mixture of days with talks and field excursions, so the venues always have a great record of volcanic activity and ash deposits (tephra).

The Kagoshima district of Kyushu is no exception to this, with a wealth of active and historical volcanic landscapes which richly deserves its recently awarded “Geopark” status. I had been invited to give a keynote paper at the meeting on the development of laser ablation ICP-MS techniques for the trace element analysis of individual fragments of volcanic glass (“shards”) 10 microns or so in diameter. This method, pioneered in Aberystwyth for the analysis of shards of volcanic glass by Bill Perkins and myself, is now making a significant impact on the ability to correlate deposits of tephra from place to place, and data from the laboratory here



*The steaming, sulphurous lake atop Mount Aso, central Kyushu.*

from about 15 counties, with about half from Japan. The meticulous organisation of the meeting included a sumptuous local buffet provided

at Aberystwyth featured in 8 other papers presented at the meeting. The conference proceedings will appear in a special volume of Quaternary International in 2011.

The Kyushu meeting drew about 80 delegates

for us at the home of the mayor of Kagoshima, an entertaining and colourful character, and a “right on cue” eruption of Sakurajima during the first mid-conference field trip, when we were looking at mudflows and defence engineering at



*Unzen volcano, looking over the mudflow from the 1994 eruption which killed 43 scientists and journalists.*

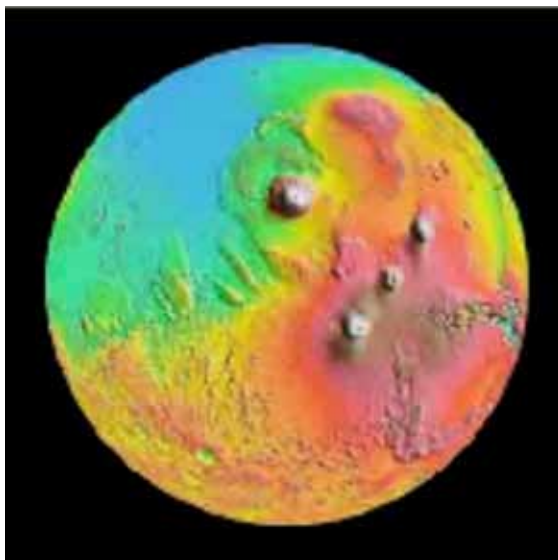
the foot of the volcano. Perhaps this was not too surprising though, as it had already erupted over 500 times by mid May of this year, reinforcing the “active” in the title of the meeting. A 3-day post conference trip followed, taking in the lowering Unzen volcano on day 1, a menacing, jagged peak looming over the city of Shimabara; and the steaming, sulphurous volcanoes of the 50 km diameter Aso caldera in central Kyushu on day 2. The trip ended in Beppu City, after a final day looking at deposits from the Kuju volcano. After the field trip I travelled to Kyoto to give a lecture at Geology Department in the University, and a day of sightseeing around the temples and palaces of what I imagined “traditional Japan” to be, a stark contrast to the volcanic landscape of Kyushu. The trip ended with a 2½ hour 400 mile journey on the *shinkansen* back to Fukuoka, fulfilling one of those boyhood wishes of high speed train travel, before returning to the quieter landscapes of the UK.



# Mars in a Day

Stephen Tooth

*On Wednesday 26<sup>th</sup> May 2010, a mini-conference entitled 'Scientific Exploration of Mars and Other Planetary Bodies: An Aberystwyth University Perspective' was held in the Physics Main lecture theatre. The idea for the mini-conference had arisen from discussions among the newly-established IGES Mars Surface Environments (MSE) Research Cluster, which is open to staff, postdoctoral and postgraduate students with interests in surface processes and landform development on Mars and other planetary bodies (e.g. large moons), and/or in space exploration more generally.*



The mini-conference had been proposed as a way to clarify and present the aims of the cluster, as well as to identify possible areas for future collaboration with other people across the university, particularly in Computer Science (Space and Planetary Robotics Group) and the Institute of Mathematics and Physics (Solar System Physics and Exploration Group). The mini-conference had been advertised by word-of-mouth only, but nonetheless attracted 35-40 staff and students from across the university, as well as some people external to the university.

The day started with a welcoming address by Professor John Grattan, newly-appointed Dean of Science, in which he admitted (tongue-in-cheek) to his early impressions of Mars having been shaped by events and characters in his teenage comic books! The leaders of the three main relevant research groups/clusters around the university then gave 30-minute overview talks: Dr Stephen Tooth for the MSE cluster, Professor Dave Barnes for the Space and Planetary Robotics Group, and Professor Manuel Grande for the Solar System Physics and Exploration Group. Each talk highlighted the Mars- and space-related activities and aspirations of the various groups/clusters, and each promoted plenty of questions and discussion from those present in the audience.

After coffee, the rest of the morning and much of the afternoon was dedicated to individual 10-15 minute talks from members of the three groups/clusters. A range of talks were given by MSE research cluster members, and included highlighting the use of earth-based analogues (e.g. in Antarctica and the Atacama Desert) for investigating the geomorphology of Mars, the application of remote sensing imagery to the mapping, description and analysis of

'glacier-like' landforms on Mars, the problems and potentials of developing luminescence methods for dating the surface of Mars, and the social and political perspectives relevant to contextualising geographical research on Mars and in space. Talks were also given by Space and Planetary Robotics Group members, and the Solar Systems Physics and Exploration Group members. These addressed such topics as the philosophy and techniques of autonomous planetary science, including robotics scouting vehicles, ground vision processing methods, and autonomous Martian rock detection and mapping, to the nature of the interactions of the solar wind with planets and planetary bodies, the implications of different planetary properties (e.g. magnetic field strength) for the associated long-term planetary atmospheric evolution, and methods for automated mapping and cartography of planetary surface features.

The meeting concluded with an open discussion. The various group leaders gave their impressions of the day, highlighting whether any potential areas for collaboration could be identified and, if so, how these could best be taken forward into tangible activities. From these comments, and subsequent contributions from other people present, there was palpable enthusiasm for identifying and undertaking a range of future collaborations. A proposed future activity was an 'Aber in Space' day that would highlight Aberystwyth University's involvement in planetary and space research, including the science education and outreach aspect of this involvement. The IGES MSE cluster will continue to position itself so that it can both contribute to and benefit from such endeavours, particularly by demonstrating the synergies that exist between earth-focused and space-focused research activities. It is all too easy to forget the enormous advances in the Geographical, Earth and Environmental Sciences that have been made possible over recent decades as a result of space exploration (just think of satellite imagery and the advent of Global Positioning Satellite systems, for example), but as the IGES contributions to the mini-conference illustrated, many Geographical, Earth and Environmental Science activities here on Earth in turn can make contributions to the analysis and interpretations of other planets and planetary bodies.



*Different perspectives on Mars: (top right) distant view of the 'Red Planet', illustrating its essentially dry, dusty, basalt-covered surface and its two polar ice caps; (centre) Martian topography, showing the relatively high-elevation terrain in the southern hemisphere (browns, reds and yellows), the enormous volcanoes in the Tharsis region (whites) and the lower-lying terrain in the northern hemisphere (greens and blues); (bottom right) Mars in comparison to Earth. Although much smaller than Earth in terms of its radius, Mars presently does not have an ocean and so has a similar land surface area, and possesses many landforms similar to those found on Earth.*



# Telling Tales of Sewing Sails

Dorothy McCarthy

*One of the main reasons I chose to study at Aberystwyth was down to my desire to live by the sea in the hope I would get round to learning to sail, something which has appealed to me since the age of 5 when I first clapped eyes on the Jolly Rodger in J.M. Barrie's 'Peter Pan'. All the other girls at school wanted a Wendy House, but I had my heart set on a pirate ship. Somewhat inappropriate when you live in the middle of the Pennine Moors.*

Despite this yearning for the big blue, after two years of study here next to the sea I still hadn't got round to signing up to the sailing club what with all the other distractions of university life. The ship design doodles on the corners of napkins continued, as did my quiet belief that an opportunity (with sails) would one day present itself. It has.

I have just returned from a summer's boat building in Kolbu, Norway, working on the construction of the first of a group of vessels set to act as a green method of transportation for organic supplies between coastal eco villages, transition towns and organic producers scattered across the globe.

Built to withstand arctic climates and severe Gales, our maiden voyage will entail roaming diverse seas, from the Persian Gulf to the Northwest Passage, searching out the coastal organic producers we have been in contact with, exchanging supplies and outlining details of future sail-trade to come.

The boat is due to set sail from Norway in mid 2011, and thanks to my contribution in the construction I have earned myself a bunk onboard. Come my graduation next July I will be leaving Aberystwyth after a fabulous three years... but from the harbour apposed to the train station. Everyone talks of the beauty of an Aberystwyth sunset. Sailing into one seems a fitting ending to a fabulous three years.





# How to survive in Borneo

Owain Morris

Last summer, I was fortunate enough to spend a month on an expedition in 'Malaysian' Borneo with 11 other people. These were four weeks that I will never forget. The expedition was divided into six major parts with community elements and adventure being the focus of the journey. After spending a few days in Kota Kinabalu, the capital of the state of Sabah in Malaysia, familiarising ourselves with conditions, the journey began.

To begin with, we had three days in 'Miki's Survival Camp', a jungle survival camp. Here we were able to familiarise with the tropical jungle surroundings. To get there, we had to hike for 3 hours through secondary and then primary forests. Once at the camp itself, we engaged in number of new activities: using a blowpipe; a night hike through the forest that encompassed the camp; using a 'machete' to create a cup; washing in the local river, as well as sleeping under mosquito nets on a floor made of bamboo.

Next we went on a Jungle Trek which took us through 5 small villages in the forest and we slept in one of the villages' community hall. This was one of the biggest challenges of the expedition. From the oppressive humidity, to gigantic bugs, and the leeches(!), we encountered a number of challenges. However, over the 5 difficult days walking, we were showing signs of a striking team-spirit.

A community project was next on the agenda, the highlight of the expedition for me. This indeed was a striking and humbling experience, one which I will never forget. The main aim was to re-paint the village's community hall and paint murals for the school, but we also spent a lot of time playing games and teaching English to the younger children. There was also a cultural evening held where we learnt local traditional songs and dances.

The next three parts were short but were also different and stunning experiences. The first was a visit to an orang-utan rehabilitation centre, where I had the privilege to stand less than a metre from a free orang-utan. It was a special experience to see how similar the characteristics of the human are to the orang-utan.

The next challenge was to conquer the mountain that's amongst the largest in south-east Asia; Kinabalu Mountain, which stands at a height of 4,095m. We were expected, with experienced guides, to walk to the 3,270m point on the first day, to the Laban Rata Resthouse. We then needed to rise at 1 o'clock the next morning to walk the last 2km in time to see the sunrise from Low's Peak, the peak at 4,095m. In spite of the challenging circumstances with regards to height and walking long distances it was, without any doubt, worth the effort to see the fantastic scenery.

By now, we had had over three exciting, hard and emotional weeks. We therefore welcomed the final part of the expedition. We were fortunate enough to be able to camp for 2 nights on Mamutik Island, near to the city of Kota Kinabalu.

This was a fantastic opportunity to relax, enjoy the white sands, drink fresh pineapple juice and swim in the clear sea amongst tropical fish. Three days to remember before starting on the journey back to the UK.

I learnt such a lot of things and developed a number of skills, especially team skills, leadership skills and communication skills, during my month there. I left Borneo a more mature person, having learnt a lot from the incredible experiences here.





# DEPARTMENTAL NEWS

## Dr Deborah Dixon



Dr Deborah Dixon and IGES Honorary Professor Sallie Marston have been awarded £577,387 (£344,320 to IGES) under the Arts and Humanities Research Council/National Science Foundation program for interdisciplinary research for a project entitled, "Science-Art Collaborations on Bodies and Environments". This project will take stock of the emergence, character, scope, and import of contemporary collaborations between scientists and artists found working together in laboratories, studios, and in the field. These have emerged to both engage public interest in the vital scientific, political, and ethical issues of our day and challenge long held divisions between art and science. Their 'hybrid' projects seek to raise awareness of how we modify and use human and non-human bodies, interact with and change our environment, and conceptualize humanity within the broader cosmos. The project will focus in-depth upon five examples of collaboration spanning, on the one hand, climate change, landscape restoration, space exploration, computer visualization, and biotechnologies, and, on the other hand, dance, film, music, sculpture, and painting.

## Dr Gareth Hoskins and Dr Mark Whitehead



Dr Gareth Hoskins and Dr Mark Whitehead have been awarded £137,000 by the Arts and Humanities Research Council for a two-year research project examining the way in which social and environmental pasts are brought together at industrial heritage sites. The project will compare three examples commemorating resource extraction: a gold mine in Nevada City, California; a diamond mine in Bloemfontein, South Africa; and the Big Pit coal mine in Blaenafon South Wales.

## Professor Dave Kay

Professor Dave Kay will lead a major new initiative to improve coastal water quality around the Irish Sea, funded by the European Union Wales-Ireland Cross-Border Programme. The 'Smart Coasts, Sustainable Communities' initiative was announced by the Welsh Environment Minister, Jayne Davidson. The initiative will receive £.2.7 million in funding from the EU Cross-Border Programme, and will be led by IGES and University College Dublin in partnership with the Environment Agency, the Irish Environmental Protection Agency, Welsh Water, Swansea Council and Wicklow Council.



## Mark Macklin, Chris Thomas, Mark Smith and Javier Gamarra



NERC have awarded funding for research on 'Hydro-dynamic drivers of malaria transmission in Africa' (HYDROMAL) to a team of IGES and IBERS researchers. The project will be led by Chris Thomas in IBERS, working with Mark Macklin, Mark Smith and Javier Gamarra in CCCR. The three year grant is for £501,000.

## Dr Peter Bunting

Dr Peter Bunting has been awarded a University Teaching Excellence Award. The award was presented during the graduation ceremony. This award recognises and rewards staff for their contribution to the quality of the learning experience in AU and affirms the University's commitment to teaching excellence.





# DEPARTMENTAL NEWS

## NEW STAFF

### Carina Fearnley



Carina Fearnley joined IGES as a Lecturer in Environmental Hazards in October 2010 from the Aon Benfield UCL Hazard Research Centre at University College London. Carina has a background in Geology and Mining, studied at Imperial College London (BSc and MSc), but her recent research is interdisciplinary bringing together hazard science, disaster management, and science and technology studies to better understand natural hazard early warning systems. Her PhD research specifically reviewed the implications of standardising volcano alert level systems within the USA, and how scientists act in the context of risk, uncertainty and complexity. Last year she co-organised an international conference on 'Disaster Risk Reduction' that explored ways to put research into practice ([www.ucl.ac.uk/drrconference](http://www.ucl.ac.uk/drrconference)) and earlier this year, she was involved in the Eyjafjallajökull ash crisis that affected the UK and Europe, going on BBC radio and even Frank Skinner's TV program! In her spare time Carina is a keen photographer, enjoys skiing and Nei Jai martial arts, music, art and travelling.

### Bethan Davies

Dr Bethan Davies started in as a PDRA in the Centre for Glaciology, IGES, in April. Bethan completed her PhD in Quaternary Geology at Durham University in February 2009, and arrived in Aberystwyth after a short stint at the British Antarctic Survey. Bethan is now working with Professor Neil Glasser and Professor Mike Hambrey on the glaciation of the northeast Antarctic Peninsula on centennial to millennial timescales. The project aims to characterise ice sheet response to global warming through a combination of remote sensing, field-based geomorphological mapping and cosmogenic nuclide dating. The project team will be travelling to James Ross Island and the Antarctic Peninsula in January for a 2-month field season.



### Richard Williams



Richard is a new Research Associate at IGES. He has an undergraduate degree from the University of Cambridge and a postgraduate degree from Lancaster University. Before joining Aberystwyth University, Richard worked for four years as a flood risk analyst at JBA Consulting. Richard's research interests lie in the fields of fluvial geomorphology, hydrology, flood inundation modelling and geomatics. At IGES, Richard is working on the ReesScan project. This project aims to develop improved models of the processes that link channel change in braided rivers to the flood flows that drive their dynamics.





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