

Global Climate Change Research Cruise



Every year four or five of our Oceanography or Marine Biology Undergraduates go to work at the Canadian Institute for Ocean Sciences on Vancouver Island during their summer vacation between 2nd and 3rd year. They work on a number of science programmes over a 6-7 week



In their time off over the weekends they took up scuba and sky diving - Sophie, Michelle and Katie did eventually try the later from a plane having practised their synchronised sky-diving on the ground first!

period. This year they joined a major research cruise to the Arctic Circle looking at global climate change (living on board ship for 3 weeks), studied crab populations in Vancouver Sound (no that's not them collecting dinner), and were involved in geophysical surveys of the deep channels in the sound.



This newsletter is published by the School of Ocean and Earth Science at the National Oceanography Centre, Southampton. The School offers undergraduate and post graduate training across the full range of Ocean and Earth sciences with an Excellent grading for teaching quality and a grade 5A in the 2001 Research Assessment Exercise.

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soes news

News from the
School of Ocean and Earth Science
at the National Oceanography Centre, Southampton



The learning curve: TTR15 through the eyes of students

Becca Moremon and Emily Morris, two final year Master of Geology undergraduates, took part in the Intergovernmental Oceanographic Commission (UNESCO)-sponsored Training Through Research cruise 15. Here's their account of the experience...

"This was our first research cruise, joining the huge Russian 'RV Professor Logachev' in Istanbul to take part in the third leg of the TTR15 cruise. We set out to study tsunami-generated turbidity flow deposits around Stromboli, off Sicily, and the slope stability along the coast of Calabria, Italy. The cruise programme has the overall aim of training students how to operate the equipment aboard the ship and encouraging them to actively take part in analyzing the data acquired. Each morning either a student or a scientist gave a formal presentation either on methodology or the analysis of data we'd acquired. We were split into three different teams, and found ourselves in the sedimentological team, studying drill cores, sampling them and compiling core logs. It was fascinating to work with such a diverse group of students - between them, the students in our team alone spoke six different languages,

and all had different scientific backgrounds. At the end of the cruise all the students presented their findings in a



conference meeting; it was most impressive to listen to students present talks in English, when this was not their first language! It wasn't all hard grind - we did manage to take occasional advantage of the Mediterranean sunshine on deck and we even arranged an international table tennis tournament! Our participation in TTR15 provided an excellent opportunity to discover what science cruises are like, and to receive practical training in an active research environment, alongside students and researchers from all over Europe - something that isn't usually on offer to an undergraduate at university."

Studying ancient climates in the Frozen North

By taking our geology degrees at the School of Ocean and Earth Science, we had expected to go on a few field trips, but none of us expected that we would end up in the Arctic Circle! On the 1st September 2005 three incredibly excited students (Robert Thorne, Rebecca Moremon and Emily Morris), along with two perhaps equally excited supervisors (Drs. John Marshall and Ian Harding), boarded a plane bound for the extreme north to collect samples for our 4th year independent research projects.

Spitsbergen is a Norwegian island in the Svalbard archipelago, located at 78° North and bordering the Arctic Ocean, Barents Sea and North Atlantic. We had travelled to this remote place to collect samples that will hopefully reconstruct a period of dramatic climate change that happened in these high northern latitudes some 55 million years ago.

Although we arrived in the depths of night, it could

easily have been mistaken for the early evening; we experienced the end of the polar summer; the sun never properly setting during our stay. Even reaching our sampling area was an adventure, involving a two hour trek which included crossing a glacier, scrambling over terminal moraine and scaling the banks of a steep meltwater stream. Over the next 5 days we managed to collect around 800 rock samples from a steep stream gully in conditions of light snowfall and considerable wind-chill!

The highlight of the trip was a climb along the crest of a snow-capped mountain on our penultimate afternoon. This provided a spectacular glacier-strewn view of the region in which we had been working, and a sense of being (literally) on top of the world - this was an experience that none of us will soon forget, providing an opportunity to visit one of the least-visited parts of the world. We may not have seen a polar bear but we did return with a brilliant set of photographs!



Chris Packham names University's £1 Million Research catamaran

The official naming ceremony for the University of Southampton's new research catamaran RV Callista took place at 3.45pm on Wednesday, 26 October 2005 at the National Oceanography Centre, Southampton.

The Vice-Chancellor, Professor Bill Wakeham invited TV presenter Chris Packham, a graduate of the University, to officially name the £1 million vessel. RV Callista will be used by the University's School of Ocean and Earth Science for teaching, outreach and research and will be based at the National Oceanography Centre, Southampton.

Finance for Callista has been provided in part by the University of Southampton's successful flotation of a spin-out company. Professor Andrew Roberts, Head of the School for Ocean and Earth Science said: 'Due to the success of the University's enterprise agenda, Callista will be instrumental in developing coastal research and in training the next generation of ocean and Earth scientists.'

At nearly 20 metres, RV Callista has capacity for up to 30 passengers and is an impressive addition to the School's fleet of inshore craft. Built in Finland, the catamaran has a working deck aft, a wet lab amidships and a dry lab forward – all with wheelchair access. Professor Roberts continued: 'Callista is laid out in the same configuration as a larger research vessel. This gives the students practical experience of working in a research environment.'



Antarctic News

Dr. Debora Iglesias-Rodriguez, a lecturer in Marine Molecular Biology at the National Oceanography Centre, Southampton participated in the 2004 Antarctic cruise funded by the National Council for Scientific and Technological Development and the Ministry of Environment, through the Brazilian Antarctic Program. It involved five main areas: atmosphere, solar exploration and its impact on the Earth, geology, education and logistic training, and live sciences. The research cruise was led by Dr. Carlos Garcia from the University of Rio Grande and captained by Joao Bandeira Leandro. Sampling for phytoplankton population dynamics, primary productivity, atmospheric and ocean physics parameters was conducted West of the Falkland Islands and in the Drake Passage. Five scientists and instrumentation were deployed to Elephant Island to conduct research on elephant seals. The cruise ended in the Brazilian Antarctic Station Comandante Ferraz.



The last CTD of the 2004 Antarctic cruise in one of the most productive regions of the world's oceans.

Landslide study at La Palma

In April 2005, a trio of MGeol students (Terhi Salo, April Lloyd and Gareth Jones) accompanied Dr. Russell Wynn to La Palma, a rugged volcanic island in the western Canary archipelago. The students' research project involved a study of active faulting on the island flanks. This research is highly topical as some scientists believe these faults are precursors to a major tsunami-generated landslide, and it is anticipated that the students' results will contribute towards a better understanding of the volume and nature of any future landslide event. The researchers' mapping and measurements revealed that the fault system is much more complex than previous studies had suggested. Thus the whole issue of a future La Palma landslide needs further research and careful study, but our preliminary results argue against recent suggestions that such slides could generate tsunamis capable of inundating New York City. As for the students, fame and fortune may await, as a film crew from National Geographic TV spent several days with the team, filming their work in the field for a new documentary on landslides!



Friends Reunited

Two former Southampton Undergraduates recently brought their company Ariana Resources to the Stock Exchange London and raised £1.165 Million. Steve Poulter (29) and Kerim Sener (28) (2nd and 3rd from the left in photograph) had ambitions to form their own company immediately on graduation, however, in the first instance they gained experience by working for other exploration companies. In 2002 they set up a company called Ariana Resources and based their exploration program in Turkey. In July this year they successfully took the company to the London Stock exchange and are now recognized as probably the youngest executive team in the mining industry.



Fossil Hunting in the Land of the Dragon



Jon Hayden (right) with Dr Ian Harding, SOES (centre) and local guide.

Although working at opposite ends of the geological time scale and in two geographically distant parts of China, Jon Hayden and Ian Brewer both had the same goals in their Master of Geology research projects. Jon travelled to SW China to collect samples from the world-famous Lower Cambrian Chengjiang deposits in Yunnan, a fauna crucial to our understanding of the early evolution of multicellular animals; Ian worked on the equally famous Yixian Fauna of NE China, the locality yielding the early Cretaceous feathered dinosaurs which are so radically changing our ideas of bird evolution. The meticulous laboratory analyses completed by both students sought to understand the environmental conditions which led to the exceptional soft-tissue preservation that both these deposits display - and such was the success of both studies that the results will be published in international science journals.