



# EBI NEWSLETTER

From the Earth and Biosphere Institute

June-July 2008

## Editorial

### How EBI studentships have helped transform the Scientific landscape in Leeds

As you know, Dominique Tobler is the first EBI student to have submitted her thesis and passed her viva. Others are expected to follow soon. Dominique has in many ways lead the way and set the precedent for others to follow. She has applied for a received travel bursaries for most of her field work in Iceland and New Zealand, for a prestigious Geobiology summer school in California and an ESA led Astrobiology summer school in Austria and to attend various conferences abroad. She has given talks at major international conferences in Australia, Germany, Vienna and Canada and has had her first two papers accepted for publication in Geobiology and Mineralogical magazine (co-authored with her other EBI supervisor Dr. Jerry Knapp). Her work, on the involvement of bacteria in the formation of silica in hot springs, has helped develop new areas of Geobiology in Leeds. This is an important research area involving a number of colleagues in SEE, Geography and Biology. Dominique was an early part of the vibrant research group built up now by Liane G. Benning and others which has reached out to include a number of other colleagues across EBI including myself. We are now advertising for a new faculty position in the School of Geography as part of the water@leeds initiative aimed at building a direct connection between research groups in this area. While it would be silly to suggest that Dominique herself was key to all these changes, it is clear that the studentship and some of the other ways in which EBI was involved contributed significantly to the development of the Geobiology group and helped make it into one of the most exciting, active and internationally recognised research groups in the university.

**Mike Krom**

### The 2008 EBI PhD Studentship

A warm welcome to Sophie Faucet, who has been awarded the EBI PhD studentship for 2008. Sophie will work with Tim Baker (Geography), Keith Hamer (Biology) and Rob Mortimer (Earth) on the carbon dynamics of Ghanaian forests. While one aspect of this project will involve comparison of current tree and liana biomass with that from 20 years ago in permanent forest plots in Ghana, another will assess the effects of climatic, disturbance and edaphic factors on forest structure. Here, Sophie will use some new techniques for measuring soil phosphorus developed by Earth Sciences in Leeds.

This is indeed a curious moment for the EBI....As we congratulate and bid Adieu to Dominique, our first graduate, we also greet Sophie, whose studentship may perhaps be the last offered by the EBI, as our future trajectory in the context of new university initiatives is somewhat uncertain.

### The first EBI PhD Graduate!!!

Congratulations to Dominique Tobler, who officially became the first EBI doctoral student to graduate in June this year!!! It is a proud moment for the EBI, and Dominique's work is a great example of the high-quality research that has been generated by the EBI studentship program. Dominique's work on the '*Molecular pathways to Biosilicification in Icelandic geothermal hot springs*', co-advised by Liane Benning in Earth and Jeremy Knapp in Biology, has led to some exciting and novel results. As of this writing, her work has been published or has been accepted in upper-tier journals.

Initially, says Dominique, when she began her work, her focus was more biological as she explored methods to understand biosilicification at the molecular level, but gradually her focus shifted to the more inorganic aspects of this phenomenon. Although her project changed from the original as it developed, her interests remained inter-disciplinary and she learned a variety of lab techniques. She feels that this diversity of hands-on skills and the broad perspective she has gained towards her science are direct results of the inter-disciplinary nature of her PhD. Finally, she found the different perspectives brought to her data analyses and interpretation by advisors from Earth and Biology very useful as she wrote up her work. So, at the end of the day, Dominique feels that being an EBI student made her PhD experience more diverse and enjoyable, and it is great to hear her say that.

What next for Dominique? She joins Liane on her next AMASE expedition to Svalbard in the Arctic Circle, to be followed by a research visit to Penn State University in the US; visits that she hopes will enable her to decide if she wishes to pursue her interests in astrobiology as a career. Good luck Dominique.



Tree biomass and large lianas are increasing in S.American forests. Are similar changes occurring in African forests?

## EBINS 2007-2008

The EBI Network Seminar series (EBINS) was a regular event of this academic year following its inaugural event in December 2007.

In February 2008, we hosted a student session where EBI students Mark Goddard and Claire Hutchins presented their proposed PhD research agendas and got a lot of feedback and questions from the audience.

March 2008 brought speakers Andy Challinor and Simon Lewis on 'Climate Change and the tropics', which session was very well attended. More importantly, over the dinner buffet that followed, the foyer in Geography was dotted with groups of people from Biology, Geography and Earth chatting to each other and discussing, amongst other things, some research ideas.....

In April 2008, EBINS and Biology co-hosted an evening on 'Biodiversity and Ecosystem Services', with speakers from the Nature Conservation Foundation in India, who are working with Jacobus Beismeyer and Mahesh Sankaran in Biology on a collaborative UK-India project. Again, the discussions and dinner that followed were very lively, and generated a lot of interest in conservation research and issues relating to the biodiversity hotspots of southern India.

And finally, in June 2008, for our last session of this academic year, EBINS co-hosted with Liane Benning of Earth, a mini-symposium on 'Biomineralization'. This half-day event brought in international, national and local speakers whose presentations covered various aspects of 'biomineralization' in systems where phosphates, carbonates, iron or silica are important. And once again, we rounded off the evening with our now, dare I say it, 'traditional' Indian buffet dinner ☺

An important part of EBI's mission is to facilitate and support inter-disciplinary networks across member departments. The EBINS series with its underlying intent to bring members from Biology, Earth and Geography together in a common venue for casual discussions is one of many steps towards this end. As with any such initiative, it has its own challenges. We have found it difficult to generate topics broad enough to attract cross-departmental audiences. Even where there is a given topic, the research can be varied enough that it may not be easy to discern a common thread that weaves through the presentations. We are trying to work on these issues.....and would welcome your feedback on whether this series is useful, how to make it more relevant, as well as ideas for any other such events we might run that will benefit the community. **If you have any thoughts on this, please email [j.ratnam@leeds.ac.uk](mailto:j.ratnam@leeds.ac.uk)**

