UNIVERSITY OF BIRMINGHAM

School of Geography, Earth and Environmental Sciences
Geology Newsletter

Welcome

Welcome to the School of Geography, Earth and Environmental Sciences (GEES). Should you choose Birmingham for your degree you will find exciting learning opportunities including a strong field programme. Students from Birmingham have performed best in the country for the quality of their field reports in recent years. You'll also be introduced to our vibrant research agendas which are relevant to the needs of industry today and our pressing environmental concerns. This is a place where you will feel that your personal and professional development is valued by those who teach you. We hope you find this selection of recent news items of interest.

Professor David Hannah
Head of School

Palaeoecology of Amazonia

Putting pollen and spores under the microscope to unveil the past of the Amazon ecosystem

Under the microscope: pollen from sediments

Vegetation is constantly producing pollen and spores that gradually accumulate within sediments in lakes, rivers, floodplains and other environments. These pollen and spores are the fingerprint of the vegetation trapped in rocks and because they are made of strong organic compounds, they can be fossilised for millions of years just like other types of fossils. Using micropalaeontological techniques, graduate student Carlos D'Apolito and Dr Guy Harrington are able to recover pollen from sediments and analyse them under the microscope.

Continued overleaf

Palaeoecology of Amazonia

The range of species found will tell us about the vegetation type when these rocks were deposited. During the past circa 20 million years the western Amazon has undergone dramatic changes, with the Andes uplift shifting the drainage system and later forming the present day geography of Earth's largest river. We want to understand the impact of all these changes on the composition of species in plant communities from the super rich Amazon forest.

Fieldwork

Find out what our students most enjoy about fieldwork at Birmingham, and what they get out of it. Watch the video by visiting the School homepage www.birmingham.ac.uk/gees, or scan the QR code.

MSci students take part in research cruise

Last Summer, Geology MSci students Luke Holroyd and Tobias Merry took part in a research cruise to the west of Spain to study how Europe split away from North America 120 million years ago. The cruise collected a volume of seismic reflection data measuring 20 by 65 km in map view, and extending down to about 20 km beneath the seafloor. The 3D seismic volume is the largest yet collected by a research ship, and the first such university-led experiment looking at continental breakup.

The structures imaged in this 3D volume will help reveal how the continental crust was thinned to zero thickness and how mantle rocks were exhumed. Luke and Tobias had at the time just completed their third year. They are now in their fourth and final year and are using some of the data for their MSci projects.

Undergraduates awarded funds for field projects

Following successes in previous years, several MSci students were this year awarded Rob Holloway grants by Warwickshire Geological Conservation Group (WGCG), for undertaking a range of environmental geology and geology fieldwork activities for major projects (worth half of Year 4). One funded project student collected samples for geochemical analysis whilst two others were able to regularly collect water samples from mining landscapes with the support from WGCG.

Vertically dipping quartzite beds in Donegal, Ireland, at the top of the Neoproterozoic glacial succession with Marcin Latas (WGCG funded) and Jonathan Evans for scale!

New addition to the Lapworth vertebrate collection

The Lapworth Museum of Geology has recently acquired an excellently preserved femur (upper leg bone) of a dinosaur from the Jurassic of the Cotswolds. This femur is approximately 115 cm in length, and belonged to a sauropod dinosaur: the group of herbivorous dinosaurs characterized by extremely large body size and very long necks and tails.

The acquisition is significant because sauropod dinosaur remains are rare discoveries in the British fossil record. The sauropod femur will form part of the planned new exhibition in the Lapworth Museum. Drs Richard Butler and Ivan Sansom will be supervising an undergraduate research project on the femur that will aim to provide a more precise taxonomic identification, create 3D models for use in the Museum display, and estimate the mass and dimensions of the dinosaur to which the bone belonged.

Dr Richard Butler (right) and Jon Clatworthy, Director of the Lapworth Museum of Geology (left)

Neftex Petroleum Consultants support Earth Sciences sports

Our Earth Sciences sports teams are generously sponsored by Neftex, who have recently provided our football team with brand new kit, and our mixed netball team with match bibs. They are actively engaged with our sporting program and receive regular updates on team progress. The sponsorship from Neftex has not only given the sports teams a more professional and competitive image, it has also increased their popularity for future years. Neftex visit Birmingham each year to deliver a lecture to our Year 3 and 4 Sedimentary Basin Analysis module students.

Graduate profiles

Colette Lyle

I came to the University of Birmingham as a mature student with an unconventional background in performing arts, beauty therapy and hairdressing and so was unsure as to how successful I would be.

The support and encouragement I received from the teaching staff, combined with hard work and dedication, allowed me to fulfil my potential, graduating with a first class MSci degree with honours. During my final year, I began applying for jobs and was lucky enough to be offered interviews with several companies. I was offered the position of Geoscience Technical Assistant at Neftex Petroleum Consultants Ltd before graduating and so started work almost immediately after finishing my degree.

The course provided me with the skills and knowledge needed to work within the petroleum industry, combined with many transferable skills, which I believe has greatly improved my chances of successful employment, and continues to help me produce a high standard of work.

David Ashmore

Studying BSc Geology at the University of Birmingham gave me the experience and knowledge to be able to work in the field independently, making my own observations and interpretations of rocks and structures.

The course led me straight to employment in mining geology, where I now work as an exploration geologist with Matsa Resources within the Goldfields of Western Australia and the Frazer-Albany Province. I carry out duties such as geological mapping, geochemical sampling, drill planning, core logging and interpretation of geological data.

Have any questions about your application? Get in touch…

Email: uggeologyadmissions@contacts.bham.ac.uk
Tel: +44 (0)121 414 8327
Web: **www.birmingham.ac.uk/gees**