



**Circular 380
February 2009**

Registered Charity No: 503617

President: John Travis

www.emgs.org.uk

**INDOOR LECTURES
SPRING 2009**

INDOOR LECTURE PROGRAMME

Saturday 14th March 2009 - 6.00 pm

Annual General Meeting and Members Evening

Saturday, 18th April 2009 - 6.30 pm

Lecture - The Geological Conservation Review: its rationale, methods and the future.

Speaker: Neil Ellis.

LECTURE VENUE

Indoor meetings will take place in lecture theatre B3 of the Biology building at the University of Nottingham. If you require to use the lift to B3, please speak to the security attendant who will assist you. B3 is equipped with induction loop hearing assistance. If you are attending meetings or joining a coach at the University of Nottingham, enter from the South Entrance on University Boulevard. Cars should be parked in the car park on the bend in the road just beyond the security point after Science Road. The entrance to the Biology building is at the right hand side of the rear of this car park.

The Society's Summer Field Programme will be published in full in the next Circular.

Saturday 14th March 2009 - AGM – 6.00 pm

ANNUAL GENERAL MEETING

A G E N D A

1. Apologies for absence;
2. Minutes of AGM held on 08/3/2008;
3. Matters Arising from those Minutes;

4. Secretary's Report;
5. Treasurer's Report;
6. Appointment of Auditor;
7. Editorial Report;
8. Election of Officers for 2009;
If there are no other nominations, it will be proposed from the chair that the following will serve:
President - Tim Colman;
Vice-President - John Travis;
Secretary - Janet Slatter;
Treasurer - Colin Bagshaw;
Editor - Tony Waltham.
9. Election of Council for 2009 – 8 members are eligible for re-election (Paul Guion, Richard Hamblin, Sue Miles, Judy Rigby, Duncan Short, Gerry Slavin, Ian Sutton and John Wolff) and there are 2 vacancies
10. Vote of thanks to retiring Council members;
11. Any Other Business.

The Minutes of the last AGM and the Treasurer's Report will be distributed at the meeting.

followed by:

Members Night - 6.30 pm
Volcanoes, Volcanoes, "Volcanoes"

1) A scenic guide to some Chilean Volcanoes - Alan Filmer

Chile, other than the extreme south, is almost entirely the product of the subduction of the Nazca oceanic plate under the South American continental plate. This has been going on since before the break up of Gondwanaland, so there are a wide age range of rocks uplifted by the underplating process.

The Andes, rising to over 6000m above the Benioff zone comprise more than 2500 volcanoes and form a mountain chain for the length of the country along the 5000km border with Bolivia and Argentina. The most striking volcanoes are of Pleistocene or Holocene age and have near perfect cones. Those in the far north rise from the Altiplano which is at 4500m above sea level or the Atacama desert at 3000m. Here rain is unknown or rare and the volcanoes are easily seen. Further south in the Lake District the volcanoes rise from temperate rain forests at around 1000m which receive 5m of rain per year and are thus usually hidden by cloud. Examples from these contrasting locations will be shown. During our visit in October 2007 none were erupting vigorously but a few days after we left Llaima erupted and at the time of writing (September 2008) Chaiten is erupting. Both of these are in the Lake District.

2) Vulcanism in the Northern Tanzanian Rift Valley - Gerard & Brenda Slavin

The African Rift Valley is the largest active intra-continental rift, running southwards from the Afar triple junction through East and Central Africa. The eastern (Gregory) branch ends in the volcanic area of northern Tanzania where it overlies the Tanganyika craton. Here the present day rift developed at about 1.2 Ma following an earlier broad depression in the Tertiary and forms a series of elongate basins along the foot of the north-south escarpment. Rifting was preceded by a group of major shield volcanoes producing massive lavas mainly of the alkali basalt/phonolite association, some of which developed major calderas, including Ngorogoro crater about 18 Km across, in the Crater Highlands. Following faulting at 1.2 Ma, a second phase of volcanism occurred and continues to the present day. It differs from the quiet effusive older volcanics and is characterised by highly explosive activity producing major steep conical mountains such as Meru, Oldo, Inyo Lengai and Kerimasi to widespread minor tuff cones. The magmas at these later centres are largely ultra-basic and ultra-alkaline principally nephelinites and phonolites and these are accompanied at some centres by carbonatite lavas and pyroclasts, most noteworthy at Oldo Inyo Lengai which is currently active with the latest eruption as recent as April 2008.

3) Mud "Volcanoes" of Azerbaijan - Tony Waltham

Azerbaijan is a small but rather splendid country where the fold mountains of the Caucasus break through semi-desert lowlands and disappear beneath the Caspian Sea. As a nation it receives a very few leisure visitors, but the geologically inclined tourist may well be drawn to its mud volcanoes. The Absheron Peninsula, adjacent to Baku, is host to a plethora of geological activity, with water, oil, gas and mud seeping to the surface through the thick pile of sediments in the Caspian basin.

Baku was in the forefront of the world's oil industry back in the 1870s and stands at the heart of a second boom based on the vast oilfields of the Caspian. Old oil provides some amazing industrial landscapes around Baku, and new oil provides wealth and industry on a grand scale. Surface oil seeps were recorded by Marco Polo, and many are still active today.

Azerbaijan has about 400 mud volcanoes (about 70% of the world's total). Faults along anticlines appear to offer the mud the necessary routes to the surface. It is mainly sourced from mid-Tertiary organic shales at depths as much as 8 km, and largely separate from the oilfield reservoir rocks at shallower depths. Azeri mud volcanoes come in all shapes and sizes depending on the rates and relative proportions of water, mud and methane that are extruded to the surface. Many of the smaller features (with dimensions of tens of metres) are in states of almost continuous activity, with conical edifices, advancing mudflows, growing mud domes or muddy pools on their vents. These are typically subsidiary features on larger mud volcanoes, which are kilometres across and hundreds of metres high, and have periodic eruptions with varying degrees of explosiveness. Methane provides the link between the oilfields and the mud volcanoes, and it has burned at surface vents ever since it became an early focus of the Zoroastrian religion.

Saturday 18th April 2009

Lecture - The Geological Conservation Review: its rationale, methods and the future.

The 'Geological Conservation Review' (GCR) project began in 1977. The aim of the GCR was to create an inventory of the best Earth science sites for research in Great Britain. An ambitious programme of site assessment and documentation followed. It led to the selection of 3000 sites for around 100 site selection categories for the GCR 'register' by 1990. Most of the GCR sites are presently conserved as Sites of Special Scientific Interest (SSSI's) under British law. The GCR forms the 'backbone' upon which many other geoconservation activities are based in Britain.

Since 1989 the significance of each GCR site has been progressively published in a series of books, providing detailed scientific descriptions of the sites to justify their conservation. With over three-quarters of the 44-volume GCR series now available, and the remaining titles largely complete or in press, the publication phase is nearing completion.

However, the GCR project is not intended to be a static record of Britain's best sites as selected up to 1990. Instead the GCR register will keep pace with new discoveries and developments in geological research. Limited review of the GCR register has been ongoing. In the future, further re-evaluation and confirmation of the conservation case for each site is envisaged, along with assessment of additional sites, so that the GCR assignment can continue to be a hallmark for quality in British geoconservation.

Digital information management of site records and published information will be important in the future, and the process of digitising published information for World Wide Web and CD ROM is underway. Already basic records for every GCR site are now available on the World Wide Web in the GCR database, along with extracts from published GCR books.

Other Societies Information

The Annual Saturday Seminar of the Geology Section (C) of the Leicester Literary and Philosophical Society:

Charles Darwin and the Great Pioneers of Geology

Saturday 7th March 2009 at University of Leicester, Ken Edwards Building Lecture Theatre 1 - (Assemble at 10.30 am) - 11.00 am to 5.00 pm (Reception to follow)

Tickets for the Seminar and reception are £20.00 with buffet lunch or £13.00 without lunch.

Speakers include Professor Paul Smith, Dr Cherry Lewis, James Parkinson, Dr Chris Duffin, Tom Sharpe, Professor Peter Worsley and Dr Lyall Anderson.

For further details please contact Joanne Norris on j.e.norris@ntlworld.com or look on the website: www.charnia.org.uk **Please note prior booking is essential.**

University of Leicester Faculty of Science Public Lecture

"King Coal: Time for restoration of the mucky monarch?"

Professor Paul Younger, Pro Vice Chairman (Engagement) Newcastle University
Wednesday 11th March, 7.00 pm

Paul Younger is a geologist and an entertaining speaker. Ranging widely over the issues of climate change, renewable energy, 'peak oil', nuclear power and the troubled concept of economic growth, Professor Younger will argue in this provocative lecture that a new approach to coal exploitation probably represents the world's best chance of bridging the gulf to a genuinely low carbon future.

Further details and tickets: <http://www.le.ac.uk/science/annuallecture.html>

Entry is free, but by ticket only.

Yorkshire Geological Society

The Permian Zechstein Basin of northern England and Europe: a tribute to D. B. Smith

14.00 - 17.00 Saturday 21st March 2009

De La Beche Lecture Theatre, British Geological Survey, Keyworth, Nottingham NG12 5GG

ALL WELCOME

The late Denys Smith's contribution to our understanding of the Permian Zechstein basin was immense. This meeting offers an overview of both Denys' work and exciting new developments in the sedimentology, basin evolution and applied geology of the Zechstein sequence of northeast England and central Europe.

Society Publications

- (1) **Leicester Building Stones Guide;**
- (2) **East Midlands Field Guide;**
- (3) **Sandstone Caves of Nottingham** (new full colour edition) .

Copies available by contacting the Secretary or at Indoor Meetings.

We are looking for volunteers please in the Leicester area to help in distributing the Leicester Building Stones Guide. If you can help, please contact the Secretary (details below).

EMGS Website

A plea for past EMGS Field Trip Photographs please for a gallery on the website. Pictures can be e-mailed to website@emgs.org.uk or sent to the Secretary.

New Members

Dr Rodger J Suthren, Mickleover, Derby.
Mr Richard Smith, Hucknall, Nottingham.

Marketing the Society's Publications

We are still in need of a volunteer to promote the marketing of the Society's publications such as the East Midlands Field Guide, Leicester Building Stones Guide and the Sandstone Caves of Nottingham books. If you have any expertise in this field, or even if you haven't but would like to volunteer to help, please contact the secretary or any other member of Council.

The National Stone Centre

Are looking for volunteers for guiding and other activities on the site at Wirksworth. If you can help, please contact Ian Thomas on 01629 824833 or ian@nationalstonecentre.org.uk

e-mail addresses

To minimise postal costs and photocopying charges which amount to approximately £4.00 each year for every member who still receives their Circular by post, we would very much like to send you your Circular by e-mail. If you have not already done so, please send your e-mail address to the Circular Editor, sue.miles@freethcartwright.co.uk.

Please can you also confirm your name and address when sending your e-mail so we can correlate these details with our membership listing.

The next Circular will be published in April 2009.

The next Council Meeting will be held on 7th May 2009.

Secretary: Mrs Janet Slatter, 100 Main Street, Long Whatton, Loughborough, Leicestershire LE12 5DG e-mail: janet.slatter@btinternet.com . tel. no. 01509 843297.

Treasurer: Mr Colin Bagshaw, 150 Scalpcliffe Road, Burton-on-Trent, Staffordshire DE15 9AD, e-mail: Colin.bagshaw@yahoo.co.uk tel. no. 01283 564520