



**Circular 392  
September 2011**

Registered Charity No: 503617

President: Tim Colman

[www.emgs.org.uk](http://www.emgs.org.uk)

**SUMMER 2011  
FIELD MEETINGS**

**Saturday/Sunday, 17<sup>th</sup> - 18<sup>th</sup> September - Weekend Excursion to Shropshire**

**Leader: Andrew Jenkinson**

**Date to be arranged - Visit to Prof. Azzopardi's "volcano"**

**Insurance and Safety**

Members are reminded that the Society has only public liability insurance and that personal accident insurance is a matter for individual members to arrange as they consider necessary. Up to date hard hats are obligatory for all field excursions involving quarries or cliff faces and strongly recommended for all trips. High visibility clothing is sometimes required in working quarries. High visibility tabards can be obtained from GA Enterprises, 126 Fleetside, W. Molesey, Surrey KT8 2NQ at £4.70 incl. pp. Members without suitable hard hats may be refused access to certain sites! Hard hats can be obtained from many Builders' Merchants, Wickes, B&Q Warehouse etc. for about £4.

Any non-members attending field excursions will have to pay a temporary membership fee of £2.00 and all participants are reminded that they must comply with any instructions from excursion leaders or, for example, quarry managers or their employees on Health & Safety issues.

**Saturday/Sunday 17<sup>th</sup> - 18<sup>th</sup> September - Weekend excursion to Shropshire**

**Leader Andrew Jenkinson (Geological interpretation Consultant and Lecturer)**

**Meet on the Saturday morning** at the Jackfield Memorial Bridge, Coalport side. **G.R. SJ694026** at 10.15 am.

In the morning we will take the Ironbridge gorge Landslip Geotrail walk before meeting Andrew Jenkinson at lunchtime.

In the afternoon Andrew will lead us along the famous outcrop of the highly fossiliferous Silurian Wenlock Limestone of Wenlock Edge with superb scarp and vale scenery.

On Sunday Andrew has planned a trip into the Brown Clee area with fine outcrops of Old Red Sandstone, Devonian Strata, overlain by Carboniferous sedimentary rocks and igneous intrusions. This weekend excursion will allow us to visit an area of first class scenery which is closely related to the underlying geology and to study the strata and fossils of some of the Palaeozoic sequence for which the Shropshire area is famous.

If you want to book for this weekend trip, please contact Ian Sutton at [ian.sutton035@btinternet.com](mailto:ian.sutton035@btinternet.com) or by telephone 0115 923 2360.

### **Date to be arranged- Visit to Prof. Azzopardi's "volcano"**

Following the recent very interesting lecture on multiphase flow in volcanoes, Professor Barry Azzopardi has offered us a demonstration of the man made volcano he has in his laboratory. As yet we do not have a date for this visit due to technical problems with the 'volcano', but if you are interested please indicate on the booking form with a contact telephone or e-mail and Ian Sutton will let you know immediately arrangements are made.

## **WINTER 2011/2012 LECTURE PROGRAMME**

**Saturday, 15<sup>th</sup> October 2011 - 6.00 pm**

### **Coal - more than just a fuel**

**Speaker: Professor David Large, Nottingham University**

**Saturday, 19<sup>th</sup> November 2011 - 6.00 pm**

### **56 Years of aircraft flying into ash**

**Speaker: Colin Small**

**Saturday, 10<sup>th</sup> December 2011 - 6.00 pm**

**(to be followed by Christmas Cheese and Wine Evening)**

### **Great Stratigraphical Myths - 6.00 pm**

**Speaker: Robin 'Bill' Bailey**

**Saturday, 14<sup>th</sup> January 2012 - 6.00 pm**

### **The Devensian Glaciation of North-East England**

**Speaker: Tony Cooper, British Geological Survey**

**Saturday, 11<sup>th</sup> February 2012 - 6.00 pm**

**(To be followed by the Society's Annual Dinner)**

### **Foundation Lecture: Australia's Mineral Wealth**

**Speaker: Tim Colman**

**Saturday, 10<sup>th</sup> March 2012 - 6.00 pm**

**Annual General Meeting, followed by:  
New Zealand's Earthquakes**

**Speaker: Ian Sutton**

**Saturday, 21<sup>st</sup> April 2012 - 6.00 pm**

**Members' Evening**

Gerry Shaw will be looking after this meeting in 2012. The format will be as in previous years - namely three short talks by members on a topic they have an interest/expertise in or the geology of a recent holiday trip. Members are encouraged to participate and should contact Gerry at [gerry\\_shaw92@hotmail.com](mailto:gerry_shaw92@hotmail.com) or telephone 0115 939 4037.

**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.

**INDOOR LECTURES**

**Saturday, 15<sup>th</sup> October 2011 - 6.00 pm**

**Coal - more than just a fuel**

The value of coal in the geological record is underestimated. Starting life as peat, it can be viewed as water body, soil and carbon store. As it accumulates it records changing hydrology and landscape, and captures a record of atmospheric deposition. Starting with the origin of coal as peat, the presentation will consider ways of measuring time in coal and illustrate how this can be used to estimate rates of atmospheric deposition in coal and explore the influence of massive volcanism. Finally a fascinating case study linking coal to the mass extinction at the Permo-Triassic Boundary and human health will be discussed.

**Saturday, 19<sup>th</sup> November 2011 - 6.00 pm**

**56 years of aircraft flying into ash**

Between 1953 and 2009 there have been 129 known encounters of aircraft with volcanic clouds. Of these, 94 events were confirmed as aircraft having encountered a volcanic cloud, with 79 reporting some degree of airframe and engine damage. 26 of these encounters were severe and caused significant engine and airframe damage, with 9 involving engine shutdown in flight. Since 1976 encounters are running at approximately 2 per year and are becoming more widely reported.

This talk will review the nature of volcanic ash clouds and why they are a hazard, and summarise the history of aircraft encounters with them. It will also look at why the encounters happen, typical effects on the aircraft, and the resulting effects on the travelling public, and will conclude by looking at what is being considered to help the airlines mitigate the effects and to keep aircraft flying.

**Saturday, 10<sup>th</sup> December 2011 - 6.00 p m**

### **Great Stratigraphic(al) Myths**

Stratigraphy is simple isn't it? - superposition; horizontality; lateral continuity provide the basic laws; and clay, quartz sand and biogenic carbonate will account for more than 90% of the sedimentary rock types involved. Add the fact that Phanerozoic strata, which we mostly encounter, include an irreversible sequence, characteristic fossils and you have a recipe for creating an uncomplicated, historical record. Easy!

The problem is that stratigraphy isn't as simple as this suggests; and we have been blinded to this by a series of simplifying and inter-related myths – ideas for which there is generally no evidence, or even negative evidence. They arise from the human instinct to impose patterns and trends on Nature, whether they are there or not.

There's the myth of stratigraphic *Continuity* and the myth of the *Balance* between sedimentation and subsidence, both of which involve anomalies in the rates of accumulation; and then there's the myth of metronomic stratigraphic *Cyclicality*, which demands both *Continuity* and *Balance*. None of these mythic concepts is strictly impossible, but if these conditions occur at all they are likely to be too short-lived to be of any stratigraphic significance. In fact, it is the absence of continuity, balance and cycles that allows us to make hierarchical schemes of stratigraphic classification : Bed, Formation, Group; or Parasequence, Sequence, Megasequence.

If, for the myth of continuity we substitute the working principle that there is always, as Derek Ager famously claimed, 'more gap than record', then many of the features and some of the anomalies of the stratigraphic record can be understood. This principle, in effect, suggests that what we see in many sections a succession of rare and brief 'frozen accidents' of sedimentation, representing a small fraction of the lapsed time.

**Saturday, 14<sup>th</sup> January 2012 - 6.00 pm**

### **The Devensian Glaciation of North-East England**

Detailed geological surveying in the Vale of York, north-east England has utilised GIS, to bring together digital map data, digital terrain models, and field mapping. The use of extensive borehole databases (about 8000 boreholes) and borehole modelling has allowed the understanding to be taken into 3 dimensions. The uncovering of this 3D model permits time slices to be constructed for the Devensian glaciation showing how it advanced and waned extending the modelling into 4D. As the ice advanced, a large pro-glacial lake was impounded by ice in the North Sea. Thick laminated clays with marginal sands and gravels formed in this lake. These were overridden by the advancing ice, which extended south to form the Escrick and then York moraines. The Vale of York ice blocked the river's courses around its margins and formed numerous overflow channels that, with the drainage from the ice-sheet, fed the lake in front of the moraines. As the ice front retreated more glacial lakes with laminated clay deposits formed to the north of the moraines. Eventually the eastward drainage to the North Sea was re-established and the present topography developed.

### **Other Events**

**The UK's First National Stone Balancing Showcase**  
**National Stone Centre, Wirksworth - Saturday/Sunday 10<sup>th</sup> & 11<sup>th</sup> September 2011**

#### **Stone Balancing**

The art of stone balancing is to create the seemingly impossible by balancing stones on top of each other in arrangements that appear to defy gravity. In the UK, stone balancing is somewhat of

a hidden art-form with few people practising it professionally, however it does go on and it's not uncommon to stumble upon strange rock or stone structures while walking on a beach. Internationally, there are a number of well established practitioners creating the most amazing work around the world.

### **Balancing Point**

Balancing Point aims to bring together stone balancers, known and unknown, the experienced and the novice from around the country to work together in one location, raising the profile of this hidden but dramatic art-form and the artists who create these amazing works. The weekend event will be a mix of exhibitions, demonstrations, public workshops and community stone balancing at the National Stone Centre, near Matlock in the Peak District.

The event takes place over the weekend of 10<sup>th</sup> & 11<sup>th</sup> September 2011 and forms part of the Fringe activities of the **Wirksworth Arts Festival**.

[www.nationalstonecentre.org.uk](http://www.nationalstonecentre.org.uk)

[www.responsiblefishinguk.co.uk](http://www.responsiblefishinguk.co.uk)

[www.wirksworthfestival.co.uk](http://www.wirksworthfestival.co.uk)

### **Nottingham Geotours - Programme for 2012**

#### **Cretaceous and glacial geology of North Norfolk**

23<sup>rd</sup> - 26<sup>th</sup> April 2012

#### **Geological tour of the North West USA**

5<sup>th</sup> - 25<sup>th</sup> June 2012

#### **Geology of Angus and Fife**

23<sup>rd</sup> - 28<sup>th</sup> September 2012

Further information from Ian Sutton on 0115 923 2360 or [ian.sutton035@btinternet.com](mailto:ian.sutton035@btinternet.com)

### **Information for Other Societies**

We hold information of lectures and field meetings for other local societies such as the NSSGA, Black Country Geological Society and Leicester Lit & Phil Society. If you would like details of any of these, please contact the Secretary.

### **New Members**

Dr Dave Puxley, East Leake, Leics.

Dr Ian Williamson, Bingham, Nottingham

### **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.

### **EMGS Website**

The publications page on the Society website ([www.emgs.org.uk](http://www.emgs.org.uk)) has been tidied up and updated. It now includes links to two archives:

One is the archive of the early Mercian Geologists where scanned copies of complete issues are being diligently prepared thanks to the hard work of David Bate. This is still being added to (with successive volumes) and will eventually reach volume 12 for 1991.

The other is the archive of papers and reports in the more recent issues. These will go onto the webpage two years after they appear in the paper issues of the Mercian. Currently only the 2009 material is online, but files will be extracted and posted, working backwards as far as 1992, and this takes time. Files for 2010 onwards are already prepared and will go online on their second birthday.

### **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](mailto: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](mailto: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 October 2011.**

**The next Council Meeting will be held on 13<sup>th</sup> September 2011.**

**Secretary:** Mrs Janet Slatter, 100 Main Street, Long Whatton, Loughborough, Leicestershire LE12 5DG e-mail: [janet.slatter@btinternet.com](mailto: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](mailto:Colin.bagshaw@yahoo.co.uk) tel. no. 01283 564520