



**Circular 393
October 2011**

Registered Charity No: 503617

President: Tim Colman

www.emgs.org.uk

**WINTER 2011/2012
LECTURE PROGRAMME**

Saturday, 19th November 2011 - 6.00 pm

The Galapagos Islands

Speaker: Colin Bagshaw

(The previously advertised lecture by Colin Small on Aircraft and Volcanic Ash will now take place at a later date)

Saturday, 10th December 2011 - 6.00 pm

(to be followed by Christmas Cheese and Wine Evening)

Please remember to bring a wine glass!

Great Stratigraphical Myths - 6.00 pm

Speaker: Robin 'Bill' Bailey

Saturday, 14th January 2012 - 6.00 pm

The Devensian Glaciation of North-East England

Speaker: Tony Cooper, British Geological Survey

Saturday, 11th February 2012 - 6.00 pm

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

Foundation Lecture: Australia's Mineral Wealth

Speaker: Tim Colman

Saturday, 10th March 2012 - 6.00 pm

Annual General Meeting, followed by:

New Zealand's Earthquakes

Speaker: Ian Sutton

Saturday, 21st 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 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, 19th November 2011 - 6.00 pm

The Galapagos Islands

The Galapagos are usually associated with the journeys of HMS Beagle and Charles Darwin which took place nearly two centuries ago, but the islands also have a fascinating geological past. Their origin is intimately related to the plate tectonics of the southern Pacific Ocean. The development of the Peru-Chile trench and the Andes mountains is well known but associated with this are the ocean plate movements and subsequent processes which led to the formation of the Galapagos island chain.

This chain displays marked differences along its length as regards geology and vegetation. It is these differences which provide the various environments controlling the evolution of the flora and fauna and which were, at least in part, the stimulus for Darwin's thoughts which led to his theory of evolution. Some important examples of the variations within the Galapagos fauna will be discussed.

Saturday, 10th 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 is a succession of rare and brief 'frozen accidents' of sedimentation, representing a small fraction of the lapsed time.

Saturday, 14th 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.

Saturday, 11th February 2012 - 6.00 pm

Australia's Mineral Wealth

Australia has a long mining history with names such as the Eureka Stockade, Broken Hill, the Golden Mile and the Poseidon boom. Today there are still world-class operating mines and major deposits in waiting as Australia is a major source of iron, manganese, lead, zinc, gold, silver, nickel, copper, uranium and titanium. The Western Australian Pilbara iron ore country and the South Australian Olympic Dam copper-uranium-gold province are the new frontiers. The talk will describe aspects of Australia's past mining history and current operations as well as the excitement of claim pegging during an exploration boom.

NEW SUBSCRIPTION RATES FOR 2012

Please see the attached note from our Treasurer, Colin Bagshaw, on the new rates which from 1st February 2012 will be:

Ordinary member - £18.00

Joint member - £22.00

Other Events

Nottingham Geotours - Programme for 2012

Cretaceous and glacial geology of North Norfolk

23rd - 26th April 2012

Geological tour of the North West USA

5th - 25th June 2012

Geology of Angus and Fife

23rd - 28th September 2012

Further information from Ian Sutton on 0115 923 2360 or ian.sutton035@btinternet.com

Leicester Literary and Philosophical Society

Meetings held at 7.30 pm Lecture Theatre 3, Ken Edwards Building, on main University of Leicester

Wednesday 2nd November

Dr Matt Friedman (Dept of Earth Sciences, University of Oxford) **Taking a bite out of jawed vertebrate origins.**

Wednesday 16th November

Dr Tom Argles (Open University) **What are mountains made of? A Himalayan perspective.**

Monday, 28th November

Parent Body Lecture, New Walk Museum, Leicester

Dr Kenneth McNamara (Dept of Earth Sciences, University of Cambridge) **The Star-crossed Stone: the Archaeology, Mythology and Folklore of Fossil Sea Urchins.**

Wednesday, 30th November

Professor Nick Petford (Vice Chancellor, University of Northampton) **Ash, planes and volcanoes.**

New Members

Mrs Valerie Page, Spondon, Derby.

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.

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) 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

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 December 2011.

The next Council Meeting will be held on 9th November 2011.

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

East Midlands Geological Society

Registered Charity 503617
President Tim Colman

Treasurer
Colin Bagshaw
150 Scalpcliffe Road
Burton upon Trent
Staffs
DE15 9AD



colin.bagshaw@yahoo.co.uk

October 2011

NEW SUBSCRIPTION RATES 2012

Members who attended the Annual General Meeting held last March will recall my Treasurer's Report outlining the parlous state of the Society's finances. A vote taken at that meeting empowered the Council to increase the rates of subscriptions for 2012 and following years if it were deemed necessary.

I'm afraid this has proved to be necessary and to get the finances back onto an even keel Council has agreed the following rates for the foreseeable future -

Ordinary membership.... £18

Joint membership.... £22

For members who pay by cheque, please remember to send the new rate when you renew your membership early next year. Subscriptions are due on **February 1st**. **You may like to consider changing your payment to standing order as this enables the society to receive the payment more conveniently and saves you the cost of a stamp every year.**

For members paying by Standing Order there are two possible ways of adjusting your payment.

- (i) Contact your bank and ask them to adjust the payment. (Obviously this makes life easier for me!)
- (ii) Complete a copy of the new standing order mandate and **send it to me**. I will then process it and send it to your bank

I am sorry that there has to be this increase in subscription but I can assure you that it is necessary if we are to maintain the high standards of the Mercian Geologist journal, our indoor meeting guest speakers, our field visits and the Society's contributions to geological education in the region.

Colin Bagshaw, Treasurer

EAST MIDLAND GEOLOGICAL SOCIETY

Treasurer: Colin Bagshaw
150 Scalpcliffe Road
Burton upon Trent
Staffs DE15 9AD

BANK STANDING ORDER MANDATE

Please complete the following with details of **YOUR** bank

To The Manager

.....(Name of your bank).

.....(Address of your bank)

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.....
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Please pay **on 1st February 2012 and annually thereafter** until further notice, the sum of ***£18 (Eighteen pounds)/ £22 (Twenty-two pounds)*** to the credit of The East Midlands Geological Society, account No.50050217 at The Cooperative Bank, 4-5 Exchange Walk, Nottingham, NG1 2NX, sort code **08-90-74**.

***please delete whichever does NOT apply**

Name of account to be debited

Account No.

SignedDate.....

This mandate cancels any previous order in favour of The East Midlands Geological Society

EMGS REF.....(for EMGS use)

Please return this completed form to the Treasurer who will then forward it to your bank.