



**Circular 350
August 2003**

Registered Charity No: 50361

President: Ian Thomas

www.emgs.org.uk

AUTUMN PROGRAMME

FIELD EXCURSION

Saturday, 27th September

Building Stone of Churches in Derbyshire and North Leicestershire

Leader: Albert Horton

Please note: Booking is essential for all field excursions – booking form enclosed.

INDOOR LECTURE PROGRAMME

Saturday, 11th October, 6.30 pm

Early Cretaceous Events: From Lincolnshire to Argentina

Speaker: Professor Peter Rawson (University College London)

Saturday 8th November, 6.30 pm

Geology in the City

Speaker: Professor Martin Culshaw (British Geological Survey)

Saturday 13th December, 7.00 pm followed by Christmas Buffet

William Smith and the Search for Raw Materials 1800-1820

Speaker: Professor Hugh Torrens (Keele University)

LECTURE VENUE

Meetings will take place in lecture theatre B3 of the Life Sciences (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 Life Sciences building is at the right hand side of the rear of this car park.

FIELD EXCURSION

Saturday, 27th September

Building Stones of Churches in Derbyshire and North Leicestershire

Churches provide a unique opportunity to study a large variety of building and ornamental stones. They provide an open air sedimentological laboratory. Changes in building style and use of stone will be discussed. They also provide an opportunity to study the effects of weathering on different rock types. The traverse may include churches at Melbourne, Breedon, Belton, Osgathorpe, East Leake and Clifton.

Please meet in the Life Sciences Car Park, University of Nottingham at 9.30 am. We will travel by shared cars.

INDOOR LECTURE PROGRAMME - AUTUMN 2003

Saturday, 11th October

Early Cretaceous Events: From Lincolnshire to Argentina

The Lower Cretaceous rocks of Lincolnshire and west-central Argentina lie some 12000 km apart, yet the faunas show some fascinating similarities as well as considerable differences. The back-arc sequence in the Neuquén Basin includes up to 3000 m of pre-Aptian marine sediments with rich ammonite faunas and abundant bivalves. Many of the faunas are endemic to the basin but some of the bivalves are startlingly reminiscent of the Claxby Ironstone faunas, while at some levels ammonites appear that are identical to species occurring in Eastern England. In both areas, such taxa appear at horizons that mark distinctive sea-level 'events' - rapid rises in sea-level that resulted in the spread of opportunistic species far beyond their normal areas of distribution. They provide important levels for correlation of both the Argentine and English faunas with the 'standard' Lower Cretaceous sequences of western Tethys.

Saturday, 8th November

Geology in the City

As a discipline, geology has underpinned the discovery of industrial metalliferous and energy minerals and the identification of potable groundwater. William Smith, the father of modern stratigraphy, learnt his geology while working on a number of mining and engineering projects, particularly canal building. Geology was a major influence on the advance of the industrial revolution. In more recent times, we have begun to appreciate the environmental legacy that our industrial and commercial activities have left through their exploitation of the ground. Consequently, the last 30 years have seen the increased application of geology to the solving of some of the complex environmental problems that humans have created.

The exploitation of minerals and the environmental legacy of industrialisation are often concentrated in urban areas. This is hardly surprising as many towns and cities developed where they did because of the mineral wealth beneath the ground surface. However, as society places increasing demands on development to be 'sustainable', there is need for geologists to look at urban areas holistically, identifying the resources that can assist sustainable development and the constraints that may prevent development or increase costs.

The lecture will attempt to place geology as one of the key components of the whole development process and will examine how geologists have developed new approaches to understanding the geology

of urban areas. In particular, 3D modelling of the shallow subsurface (superficial and anthropogenic deposits) will be discussed and the presentation of geological information for non-geological professionals and the general public will be illustrated. Specific issues such as the link between past land use and contamination, the environmental legacy of abandoned mineworkings, the reduction of risk in construction, the protection of aquifers and the balance between blight and increased knowledge will be discussed.

Saturday, 13th December

William Smith and the Search for Raw Materials 1800-1820

This lecture will first draw attention to what Smith called himself during his several careers. He first described himself as a land surveyor and drainer in his 1801 *Prospectus* but as an engineer and mineralogist in his first book (1806). His use of the latter word then only reveals the lack of use of the term 'geology' before the foundation of the Geological Society of London (1807). The lecture next discusses Smith's several careers and tries especially to shed new light on his work as a mineral prospector, of which he can be regarded as one of the true pioneers. The term he used for this, from John Farey (1808) was 'mineral surveyor' which was how he described himself in the prospectus to his great *Map of the strata of England and Wales* (1815) and his most important book *Strata Identified* (1816-19).

Some of the mineral prospects with which Smith was involved are next described. These can be divided into those which used his stratigraphic science in positive searches for new coal (the main mineral he sought) and others in which his new stratigraphic knowledge could equally demonstrate that many coal searches being made elsewhere were simply doomed to fail. These latter attempts, which were frequent, were always made in lithologies which resembled, but were not in, the Coal Measures. Smith was the first to show how unfortunate the British stratigraphic column was in abounding in these similar lithologies (Lias, Oxford, Kimmeridge, Wealden clays etc.). Equally unfortunately, but now for Smith, many of the founding fathers of the Geological Society were unconvinced of either the reality or utility of Smith's discoveries. Its leaders at first did not believe he had uncovered anything of significance and then simply stole much of it.

Future local events in which the Society will be involved

Derby Eco-Fest, Saturday 20th & Sunday 21st September 2003 - 11.00 am to 5.00 pm, Markeaton Park, Derby

The aim of Eco-Fest is to promote mainstream environmental issues through a fun, family-orientated event. It will feature the Green Roadshow and the Croissant Neuf Circus (non animal). Highlights include circus show, clowns, acrobats, environmental theatre, electric vehicles, magic & illusion and much more. There will be marquees so local groups and organisations can have stalls and displays. The marquees will be 'themed' to cover natural environment and wildlife, waste and recycling, transport and Fair Trade. **If any member is prepared to assist with this event please contact the Secretary.**

Insurance

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! Suitable hard hats can be obtained from many Builders' Merchants, Wickes, B&Q Warehouse etc. for about £4. Where a member has to cancel a booking it is requested that they contact Ian Sutton (0115 951 6516) as early as possible.

New Members

Mr N R Webb, Bilborough, Nottingham
Mr Alec Dodd, Ambergate, Derbyshire
Mr Ken Winfield, Bretby, Derbyshire
Mr David Redhouse, University of Cambridge
Mr Ashley Lang, Nottingham

Lectures & Field Courses of Other Organisations

The Circular Editor has contact details for the representatives of other local Geological Societies who organise field trips and indoor meetings. Please ask her for details.

Other Notices

University of Nottingham, School of Continuing Education

PROGRAMME OF COURSES IN GEOLOGY FOR THE GENERAL PUBLIC AUTUMN/WINTER 2003/2004

NEWARK

Held at Newark Town Hall and Museum

Rocks and Landscape - Lecturer: Lesley Dunn: commencing Thursday 9th October 2003 - 10.00am-12.00pm – 15 meetings.

NOTTINGHAM

Held at University Adult Education Centre, Shakespeare Street

Ice Ages - Lecturer: Albert Horton: commencing Tuesday 7th October 2003 - 10.00am-12.00pm – 15 meetings.

Life and Earth History - Lecturer: Gerry Shaw: commencing Thursday 9th October 2003 - 7.00pm-9.00pm – 15 meetings.

Geology in Western Scotland - Lecturer: Ian Sutton: commencing Wednesday 15th October 2003 - 1.30pm-3.30pm – 15 meetings.

Aspects of Practical Geology - Lecturer: Ian Sutton: commencing Friday 17th October 2003 - 10.00am-12.00pm – 15 meetings.

RADCLIFFE ON TRENT

Held at The Grange, Radcliffe on Trent

Geology of Wales and the Welsh Borderlands - Lecturer: Ian Sutton: commencing Monday 13th October - 7.00pm-9.00 pm – 10 meetings.

Brochures for these and other courses are available from the University of Nottingham Adult Education Centre, 14 Shakespeare Street, Nottingham NG1 4FQ. Telephone no: 0115 951 6516.

STOP PRESS

The Society's long awaited **East Midlands Field Guide** has now been published by the Society jointly with the Geological Association.

Copies will be on sale to members at a discount price of **£6.00** To non-members the price will be **£8.00.**

Copies are available by post on application to Ian Sutton at University of Nottingham Adult Education Centre, 14 Shakespeare Street, Nottingham NG1 4FQ. Copies are also available for sale to members in person at the Centre, or from the Secretary or other Council members.

(Please note: there will be a postage and packing charge of £1 for posting if this is requested - please add the appropriate amount to your cheque, and submit this with the application form enclosed with this Circular).

Copies will also be available for sale to members at the Indoor Meeting in October and at future meetings.

Subscriptions

Members are reminded that annual subscriptions were due on 1st February. If you have not paid yours yet, please do this as soon as possible so you can continue to receive Society information.

e-mail addresses

We have had a reasonable response to the request in our last Circular for members to receive their Circular by e-mail. The format is now exactly the same whether you receive the Circular by post or by e-mail. It would be of great benefit to the Society (and the Circular Editor!) if more members would be prepared to receive their Circular this way. Please, therefore, could members send their e-mail addresses to the Circular Editor, Sue Miles at sue.miles@freethcartwright.co.uk .

It would be helpful if you could also confirm your name and address with your e-mail address so we can correlate these details with our membership listing.

The next Circular will be published in October 2003.

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