

A Registered Charity
No. 220014

Circular 523



YORKSHIRE GEOLOGICAL SOCIETY

President: John Powell Ph.D.

GEOLOGY AND CLIMATE: RECENT BGS RESEARCH



*Permian rocks; Oman desert
Photo: Mike Stephenson*

A JOINT MEETING WITH
EAST MIDLANDS GEOLOGICAL SOCIETY

SPEAKERS: MELANIE LENG, MICHAEL STEPHENSON, MIKE HOWE,
JOHN REES and JIM RIDING

14.00 to 16.50 SATURDAY 19th MARCH 2005

BGS, KEYWORTH, NOTTINGHAM NG12 5GG
MEETING ROOM 1

Paper Sponsored by

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NON MEMBERS WELCOME

YGS 2005

GEOLOGY AND CLIMATE: RECENT BGS RESEARCH

- 1400-1650 SATURDAY 19th MARCH 2005
- 1400-1405 Introduction and Society Announcements
John Powell, President
- 1405-1440 Using geochemistry and palynology to unravel environmental change in the early Permian of Oman, the Carboniferous of the Midland Valley of Scotland, and the Devonian Orcadian Basin of Caithness, Scotland
Melanie Leng (NERC Isotope Geosciences Laboratory, British Geological Survey, Keyworth, and School of Geography, University of Nottingham) and Michael Stephenson (British Geological Survey, Keyworth, Nottingham)
- 1440-1450 BGS rock and fossil collections; an overview
Mike Howe, Chief Curator, BGS
Followed by a guided tour of the BGS museum and collections, by Mike and June Wright, BGS during afternoon refreshments
- 1450-1525 Tea and Coffee
- 1525-1600 Gas Hydrates and Climate Change
John Rees (British Geological Survey, Keyworth)
- 1600-1635 Reworked Palynomorphs as a tool for determining Quaternary Sediment Provenance in East Anglia, UK
Jim Riding (British Geological Survey, Keyworth)
- 1635-1645 Closing remarks

The BGS Shop will be open prior to the meeting until 2pm. YGS members, by special arrangement, will be eligible for a discount of 25% on all BGS publications (maps, memoirs etc.) on the day.

The Society would like to thank Independent Paper, Wakefield for sponsoring the paper for this publication, therefore allowing it to be produced in colour at no extra cost to the YGS.

GETTING TO BGS KEYWORTH

Kingsley Dunham Centre, Keyworth, Nottingham NG12 5GG.

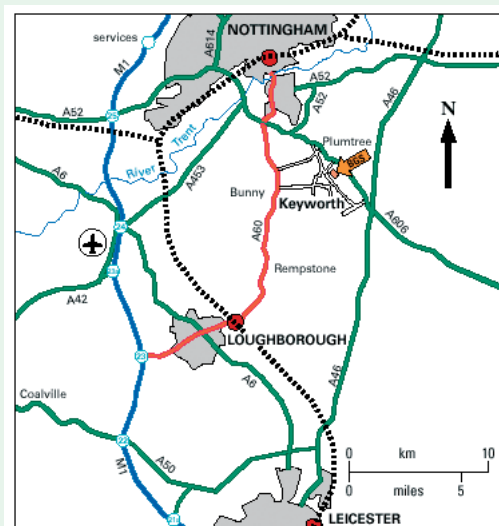
Tel: +44 (0)115 936 3100. Fax: +44 (0)115 936 3200.

Directions by public transport:

The nearest railway stations to BGS are Nottingham and Loughborough. It is possible to reach Keyworth from the Nottingham station (see below) but visitors arriving in Loughborough will need to take a taxi, as there is no direct bus service from Loughborough to Keyworth.

Visitors from Nottingham or West Bridgford can catch a Trent Barton (Keyworth Connection) bus to Keyworth, which runs from the Broadmarsh bus station in Nottingham via Nottingham railway station (the bus stop is just outside the station on the right) through West Bridgford to Keyworth.

Directions by road: See map.



BGS DISCOUNTED SALES

You can claim a 25% discount on books, maps, memoirs, etc at the BGS shop on the day of this meeting. You have to make the shop staff aware that you are YGS member to claim this discount. The shop is only open before the meeting, so get there early if you intend to make a purchase.

USING GEOCHEMISTRY AND PALYNOLOGY TO UNRAVEL ENVIRONMENTAL CHANGE IN THE EARLY PERMIAN OF OMAN, THE CARBONIFEROUS OF THE MIDLAND VALLEY OF SCOTLAND, AND THE DEVONIAN ORCADIAN BASIN OF CAITHNESS, SCOTLAND

Melanie Leng (NERC Isotope Geosciences Laboratory, British Geological Survey, Keyworth, and School of Geography, University of Nottingham)
and Michael Stephenson (British Geological Survey, Keyworth, Nottingham)

Multidisciplinary studies involving isotopes and palynology can unravel environmental change in ancient rock sequences. Here we present three examples from an ancient terrestrial, a marginal marine and a lacustrine environment.

In the Early Permian (292-283Ma) of Oman, the record of plant fossils and their spores and pollen, shows a change in the vegetative landscape corresponding to glacial warming identified from sedimentological and other palaeontological evidence. There is a parallel change in the carbon isotope ratio of woody deposits. The carbon isotope trend of 3-4 parts per thousand over thousands of years is thought to represent palaeoatmospheric changes in concentration of CO₂. The trend in CO₂ may have caused the warming that resulted in the deglaciation.



Permian Pollen Grain

In the Ballagan Formation, Early Carboniferous (345 to 340Ma) of Scotland, there is some indication from sedimentology that the muds and silts were deposited in a low energy coastal flood plain setting and this is supported by evidence from palynomorphs such as *Botryococcus* that signal low salinity waters. The oxygen and carbon isotope composition of biogenic (ostracod, bivalve) and early cement carbonates show that the carbonates were all formed in non-marine environments. There is some post depositional recrystallisation but most of the material retains a pristine signal. The stable isotope data is perhaps the only unequivocal evidence for the first appearance of ostracods colonising non-marine environments. The ostracods are likely to have left the marine environment by storm and sea flood events, and this probably encouraged their occupancy of fully non-marine freshwater environments in the later Carboniferous. Algal-rich lacustrine mudstones of the Devonian Orcadian Basin (391-370Ma) show sedimentary cyclicality. Palynology indicates that the



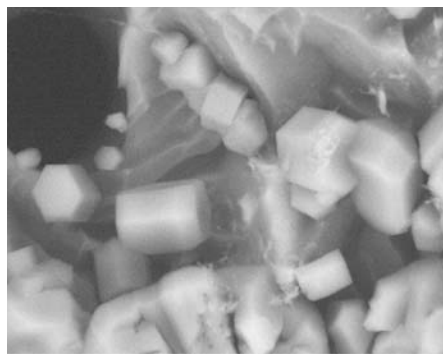
Early Carboniferous Freshwater Ostracods from the Ballagan Formation

organic material is dominated by amorphous organic matter of probable algal origin, and that terrestrial spore and wood material is very rare. The amount of organic carbon preserved is believed to be in response to fluctuations in climate, periods of high rainfall resulted in a permanent lake while drier conditions produced a shallow ephemeral lake. The carbon isotope composition of the organic carbon is related to changes in the lacustrine carbon cycle as well as the composition of atmospheric CO₂. Higher CO₂ probably resulted in a warmer climate and more rainfall, leading to higher lake levels. The cycle analysed has fine-scale annual lamination, and laminae counting of part of one cycle suggests that they may be related to the orbital Milankovitch cycle due to the precession of the equinox (21000 yrs).

GAS HYDRATES AND CLIMATE CHANGE

John Rees (British Geological Survey, Keyworth)

Gas hydrates are ice-like compounds in which gas molecules are trapped within a cage of water molecules. They are only found in very cold environments at low pressures, or warmer settings at very high pressures and are believed to be abundant in permafrost regions and around the deeper continental margins. The most common form, methane hydrate, is estimated to contain about ten thousand billion tonnes of organic carbon, which could be twice as much as in all the known other fossil fuels put together. Whilst a major interest in methane hydrates in some parts of the world is as a source of energy, most interest is as a potential driver for climate change. This is because the release into the atmosphere of large amounts of methane as a consequence of destabilization could be catastrophic; methane has about twenty times the warming potential of carbon dioxide as a greenhouse gas. Because of the physical and chemical properties of hydrate, the mechanisms of release are complex, but it is likely that hydrate has contributed to major climatic change in the past. Consequently



Carbon dioxide hydrate crystals; courtesy of C. Rochelle.

research into understanding how hydrates destabilize is important, particularly when we are warming our oceans and polar regions through climate change. Geological hydrate research does not only covers such issues, but also the future potential for society to store greenhouse gases, such as carbon dioxide, within hydrates. It is important we understand these very common, but rarely seen, minerals better in the future.

REWORKED PALYNOMORPHS AS A TOOL FOR DETERMINING QUATERNARY SEDIMENT PROVENANCE IN EAST ANGLIA, UK

Jim Riding (British Geological Survey, Keyworth)

Allochthonous palynomorphs can help determine the provenance of Quaternary sediments. Much recent work has been done on both the Crag Group and the tills of East Anglia. Reworking is an anathema to the majority of palynologists, because it can profoundly confuse biostratigraphical assessments. However, reworking can be extremely instructive because the provenance of a sediment package can be determined. Palynomorphs range back to the Proterozoic, therefore the younger the rock, the more chance of the presence of reworked palynomorphs. Palynomorphs as silt-sized sedimentary particles are especially useful because they are potentially biostratigraphically significant. A key palynomorph can give a high-resolution age assessment and individual lithostratigraphical units can be confidently identified. Palynology is especially good in multidisciplinary studies and synergises well with, for example, till clast analysis. The Crag Group (Pliocene/Pleistocene) was sourced via three major fluvial systems recognised on the basis of clasts, derived palynofloras and sedimentology. The Thames, which drained Wales, Midland England to the Thames Basin and southern East Anglia. The Bytham River, drained Midland England and the southern Pennines and reached the southern North Sea delta in north central East Anglia. This river extended its catchment during Crag Group times. The Ancaster ('Northern') River drained the southern Pennines and received sediment from north-east England. The three rivers all contributed sediment to the southern North Sea delta, i.e. to the three Crag Group units, the Red, Norwich and Wroxham formations. The Red and Norwich Crag formations were deposited by Pliocene and Early Pleistocene rivers and are characterised by: a far-travelled microflora transported in suspension and a locally-derived clast assemblage transported as bedload. The Wroxham Crag Formation was deposited by Early Pleistocene and early Middle Pleistocene rivers and is characterised by: a far-travelled microflora and clast assemblages. The Crag Group is overlain by a succession of tills and associated sediments. Tills from the Happisburgh, Lowestoft and Sheringham Cliffs formations have



*The Happisburgh and Corton Till members
(Happisburgh Formation)*

and Westphalian) and Lower Cretaceous palynomorphs. Some of the British clast lithotypes recovered are of low-durability and would have been unlikely to survive multiphase subglacial reworking. The complete absence of characteristic Norwegian lithologies indicates that there is no direct evidence of a Scandinavian provenance. The lithological and palynological content of these tills forms a coherent British suite that can be traced northwards from Norfolk into northern England and central Scotland.

been analysed. The Happisburgh and Corton Till members (Happisburgh Formation) were both thought to have been deposited by Scandinavian ice. Some far-travelled clasts were found, that could have been derived from either Scotland or Scandinavia; these include Dalradian rocks, Devonian sandstone, basalts and granite. However, further evidence indicates that a British ice sheet deposited these two tills. British materials are present that are absent in Scandinavia; these include Carboniferous (Namurian

A WORD FROM THE PRESIDENT

On a bright but cold afternoon in Sheffield, we were treated to an excellent series of talks on the general theme of red-bed sediments, transporting the audience to the Canyonlands of Utah, the humid tropics of the Etruria Formation in the English Midlands and the Namid desert of southern Africa. Oliver Jordan presented his recent doctoral research on the well-exposed sections through mixed shallow marine and coastal aeolian and fluvial successions in SE Utah that have enabled him to develop impressive 3D correlation panels, and unravel the complex relationships in these cycles attributed to Milankovitch cycles. Closer to home, Bernard Besly gave us a state-of-the-art lecture on the origin of humid tropical red-beds (Etruria Formation) that he attributed to deep lateritic weathering of source rocks rich in volcanoclastic sediment. Nigel Mountney's impressively illustrated talk returned us to aeolian desert systems, both fossil and recent, and dynamic models linking key stratigraphical and sedimentological features to climate and environmental change. The Society's field meeting to the Carboniferous and Triassic red-beds of the Canonbie Coalfield (16-17 July) will pick up many of these themes - don't miss it!

At the Sheffield meeting, I announced that minor changes to the 'Rules of the Society', approved by Council, would be published in this Circular (see later section). These changes relate to minor

financial matters that have come about since the 'Rules' were last published in 1996, and other matters arising from the recently published 5-Year Forward Plan. The changes will be presented for approval by the membership at a Special General Meeting on the 8th October at the University of Hull. Council were also pleased to learn that the Society's splendid volume 'Carboniferous Hydrocarbon Geology: the southern North Sea and surrounding onshore areas' (edited by John Collinson, David Evans, Doug Holliday & Neil Jones) will be published in March (see details herein). Finally, just to remind you that by special arrangement the BGS is offering a 25% discount on BGS publications (maps; memoirs; regional guides etc) to all YGS members at the BGS Shop prior to the next meeting on 19th March. However, the shop (in Reception) will only be until 2 pm, and the site will be busy with visitors to a 'Rockwatch' meeting the same day, so it might pay to get there early if you wish to take advantage of this offer.

John Powell

YGS COUNCIL MEMBERS

Keith Park, Circular Editor

Unlike most of the Council members I am not involved in geology for a living, but instead am classed as a 'keen amateur'. Since leaving school in 1972 I have been involved in the printing trade, initially as an apprentice trained machine manager and for the last 20 years as a director of my own printing company, currently employing around 25 people. Wanting a new challenge I embarked on an Open University degree in Earth Sciences in 1993, graduating in 2004. Besides geology I enjoy long distance running, completing the New York marathon in 2004 as a graduation celebration. Currently, I am looking for a new geological challenge and am happy to serve the YGS in whatever capacity is required.



CALENDAR

It is time to start thinking about the YGS 2006 calendar. The 2005 calendar was a complete sell out, so to avoid disappointment register your interest with me as soon as possible at k-park@bigfoot.com. Why not get your camera out and make a name for yourself by winning one of the 12 coveted spots on the YGS 2006 calendar?

SPECIAL GENERAL MEETING

Hull; Saturday 8th October, 2005

Council is calling a Special General Meeting before the General Meeting at the University of Hull (Department of Geography) on Saturday 8th October 2005. This is to seek approval for several changes to the Rules of the Society. The current Rules were published in the Directory of Members issued in June 1996, and are available on our web site (www.yorksgeolsoc.org.uk). The 5-Year Forward Plan is also published on the web site, and summary was published in Circular 518 (pp.6-7). Below, we list the proposed changes and the reasons why they are needed. Once approved, they will require ratification by the Charity Commissioners.

For Financial Reasons

Rule 5 Delete the whole paragraph (explaining that members may enter into a deed of covenant) and replace with: *“The Society may participate in schemes permitted by law which enable charities to reclaim tax on donations.”*

Explanation: The purpose of this change is to enable the Society to participate in whatever schemes are allowed from time to time rather than the Deed of Covenant scheme, which is the only one mentioned in the existing Rules.

Rule 14 Replace “ the audited accounts for each year ending August 31st,” with: *“the accounts for each year ending August 31st, examined in accordance with the requirements of the Charities Act,”*

Explanation: When the Rules were originally written the term “audited” was taken by the Society to mean countersigned by any person other than the Treasurer. Under present legislation the term “audited” could be interpreted as requiring a company style audit by a qualified Company Auditor, which could be very expensive. The Charities Act permits charities of our size to use the less expensive option of scrutiny by an independent examiner, who is reasonably believed by the Trustees to have the ability and experience to carry out a competent examination of the accounts.

Relating to changes proposed in the 5-Year Forward Plan

Rule 9 Refers to the management of the Society, which includes “two Vice-Presidents (the senior of whom shall be the immediate past President)”. *Remove the brackets and contents.*

Explanation: This will allow more flexibility in the nomination of Vice-Presidents.

Rule 12 Remove the sentence commencing “*There shall be a Publications Committee*”.

Explanation: There is no longer a Publications Committee; its role is subsumed within the new Science Committee that has an overarching remit for all scientific outputs and includes the Editorial Board and Programme Sub-Committee.

Rule 16 Remove the last sentence: “Papers will be scrutinised by independent referees and approved for publication by the Editors on behalf of the Publications Committee of Council”, and replace with: “*Papers will be scrutinised by independent referees and approved for publication by the Editors on behalf of the Council*”.

Explanation: The Publications Committee has been subsumed by the Science Committee, which includes the Editorial Board.

YGS Council, March 2005

WILL YOU VOLUNTEER TO BE A MEMBER OF THE SOCIETY'S WEBSITE WORKING GROUP?

As part of the Forward Plan implementation, the Council is setting up a Website Working Group drawn from the Society's membership to help guide and expand our already well-established presence on the Web, including a rapidly expanding section giving on-line information on the geology of Yorkshire and the wider YGS region, at <http://www.yorksgeolsoc.org.uk/>.

Specialised technical knowledge of the Internet is not necessary, just access to the Internet and familiarity with the Web and e-mail. Currently the priority is to find members willing to help search out and update information sources and links, articles, meetings and field trips of our Corresponding Societies, and geological photographs and other illustrations. Just an hour or two's help a month of this kind from a few additional Society members would greatly enhance the usefulness of our Web information services to both amateur and professional members, teachers, students and interested members of the general public using the YGS Website or finding information on it through search engines such as Google.

Though it would be good for members of the Working Group to meet and get to know each other informally during YGS meetings, this will be essentially a “virtual” Working Group conducting its business by e-mail, but reporting directly to the Society's Council.

If you feel you might be interested in volunteering, please contact our Website Editor and Council Member: Patrick Boylan (P.Boylan@city.ac.uk).

CARBONIFEROUS HYDROCARBON CONFERENCE 2002

Carboniferous Hydrocarbon Geology: the southern North Sea and surrounding onshore areas
(edited by John Collinson, David Evans, Doug Holliday & Neil Jones)
Yorkshire Geological Society Occasional Publication No. 7
Proceedings of the Conference held at Sheffield, September 2002.

This 240 page A4 full colour volume will be published in the next few weeks (February-March 2005). It brings together a series of 14 review papers important to the Carboniferous hydrocarbon geology of the Southern North Sea and adjacent onshore areas. Together they comprise a significant summary of the current state of knowledge of the area, and provide a wide-ranging overview of the Southern North Sea Carboniferous for those whose main experience is with the onshore successions. Authors include Bernard Besly, Don Cameron, Jim Cole, John Collinson, Ken Glennie, Paul Green, Sam Holloway, Colin Jones, Neil Jones, Beatrice McGlen, Duncan McLean, Andrew Morton, Tim Pearce and John Rippon.

The volume and will cost £45 plus £5 p & p.; participants in the conference and members of the Yorkshire Geological Society will be entitled to a discounted price of £35 plus £5 p & p. Details of how to obtain a copy are available from Doug Holliday, British Geological Survey, Keyworth, Nottingham, NG12 5GG, UK, or at dwho@bgs.ac.uk

NEW MEMBERS & DEATHS

New Member: Miss Jennifer Jennings
MSc, Penistone

Death: Dr C Aslin
18 November 2004

FORTHCOMING YGS MEETING: 167th SESSION

Field Meeting, 22nd May 2005

The Whin Sill and Structure on Upper Teesdale.
Leader: Trevor Morse

Indoor Meeting, 8th October 2005

Open Questions in East Yorkshire Geology: 100 years
after Lamplugh.
University of Hull

YORKSHIRE GEOLOGY MONTH - MAY 2005: EVENTS LIST

Sunday 1st May - "T.Rex's Birthday Party" at Dinostar in Hull 11am to 5 pm
(Adults £2.50. Children and Senior Citizens £1).

Thursday May 5th - "The Daring Game" public lecture by Cherry Lewis - organised by the Leeds Geological Association, at the Roger Stevens Lecture Theatre 9 Roger Stevens Theatre, University of Leeds at 7.00 p.m. Admission free.

Saturday May 7th - "Fossil Fossick" - Hull University Science Club - led by Barrie Heaton, Nigel Whittington and Stuart Jones. Contact the Science Club for further details.

Saturday 7th May - "Where on Earth did that come from?" A geological walkabout in Sheffield City Centre. 11.00 - 12.30pm led by Mr. Peter Kennett (representing Earth Science Teachers' Association, Earth Science Education Unit, Yorkshire Geological Society and Friends of the General Cemetery) (free - no booking required)

Saturday 7th May - "A walk on the Woldside" - led by Derek Gobbett for the Hull Geological Society. 2-5 p.m. walking about 6 km; meet at Thixendale. Cross Keys Pub, SE845 611; please 'phone 01262 470678 to book.

Sunday May 8th - "Exploring the remote geological past on Ilkley Moor" led by Neil Aitkenhead for the Leeds Geological Association (free - booking required).

Friday 13th May - "Stones and Bones" an evening walk in Spring Bank Cemetery looking at the rocks used as gravestones and the history of some of the characters buried there, led by Chris Ketchell of the Hull College Local History Unit and Mike Horne of the Hull University Centre for Lifelong Learning.
(Booking required - 'phone 01482 346784)

Saturday 14th May - "Geology in an urban graveyard" at Sheffield General Cemetery led by Mr. Peter Kennett (representing Earth Science Teachers' Association, Earth Science Education Unit, Yorkshire Geological Society and Friends of the General Cemetery) 11.00 - 12.30pm (free - no booking required)

Wednesday 18th May - Landscape and Geology from a Pennine edge near Huddersfield by Andrew Krasinski of the West Yorkshire RIGS Group. Free. starting 13.00 and finishing about 17.00. at the Crossroads Pub (SE 179085)

Saturday May 21st - The Waterfalls Walk, Ingleton. Martin Dodson and John Varker, Leeds Philosophical and Literary Society. With support from the School of Earth and Environment, University of Leeds. all day. Booking required.

Sunday 22nd May - Geology and Scenery of Danes Dyke - morning walk led by Mike Horne for East Riding of Yorkshire Council and Hull Geological Society. (Free; booking required - 'phone 01482 395323.)

Saturday May 28th - Earth and natural sciences roadshow at Hull and East Riding Museum, 11 am to 3pm (admission free - sorry no valuations). Bring along your rocks, fossils, minerals, archaeological finds to show to the experts.

Saturday 28th May - opening day of Ice Age display at Yorkshire Museum - admission - standard museum fees of 4 pounds for adults, 3 pounds concessions, 2.50 for children, 'Yorkcard' holders free.

- Saturday 28th May - Castle Hill, Huddersfield - Rocks under your feet.** led by Sheila and Harold Dyson of West Yorkshire RIGS Group. Free. Booking not required.
- Sunday 29th May - Castle Hill, Huddersfield - Rocks under your feet.** led by Sheila and Harold Dyson of West Yorkshire RIGS Group. Free. Booking not required.
- Sunday 29th May - Horbury Quarry and Addingford Cutting** led by Richard Bell. Richard; Organised by the West Yorkshire RIGS Group; free, booking not required.
- Thursday 2nd June - Geology of the North York Moors Railway** - led by Chris Darmon of Geosupplies Ltd. (booking required - times subject to railway timetable, Standard price is £9.00 per adult, £8.00 concession over 60 years. Special family rate of £15.00 for 2 adults and up to 3 children under 16. plus train fare)
- Friday 3rd June - evening walk at Hessele Foreshore and Humber Bridge Country Park** - led by Mike Horne for East Yorkshire RIGS Group and East Riding of Yorkshire Council.
(Free - Booking required - 'phone 01482 395323.)
- Saturday 4th June - Rock and Fossil Roadshow at Hornsea Museum.** Organised by Hull Geological Society in association with Hornsea Museum 11 am to 3 pm. Admission fee for the Museum.
- Saturday 4th June - Yorkshire's Rocks and Fossils in the new "Earth Visualisation Laboratory"** at the University of Leeds. Organised by Martin Dodson and John Varker, School of Earth and Environment. Morning only. Free. Booking required.
- 4th or 5th June - "An introduction to the geology, flora and history of the North Pennine lead mines"**. by Yorkshire Wildlife Trust. Booking required - Yvette Jacques on 01904 659 570.
There will be a charge of £15 to cover costs.
- Monday 6th June - A talk on Rocks and Landscapes of the Huddersfield area,** by Alison Quarterman, Chairman of the Huddersfield Geology Group, booking not required, costs 2 pounds, starting at 7.15
- Thursday 9th June - Brow Grains, Meltham, Huddersfield** from 14.00 to 16.30 4 miles walk on Meltham Moor to see sandstones with plant fossils, bell pits, ganister and good views of the geology of Huddersfield.
- Saturday 11th June - Geology of the Horton in Ribblesdale Area** led by Colin Schofield BSc for Down to Earth/Geo Supplies Ltd. Fee Adult £9.00 (Concession over 60's £8.00) booking required.
- Monday 13th June - Building Stones of the Town Centre of Huddersfield** led by Alison Quarterman of the Huddersfield Geology Group 7.00 - 9.00 Free, booking not required
- Saturday 2nd July - Yorkshire Geology "gathering"** at Yorkshire Museum - to review YGM2005 and plan for the future. Lots of 'networking'. Booking required.

CORRESPONDING SOCIETIES

Contact society representatives for the latest information.

CRAVEN & PENDLE GEOLOGICAL SOCIETY

Yvonne James. Tel: 01282 813 772 or www.cpgs.org.uk

Members slides and displays

Friday, 8th April

CUMBERLAND GEOLOGICAL SOCIETY

Nigel Courtman. Tel: 01229 861 478 or www.cumberland-geol-soc.org.uk

Palaeodontology - Probing the Teeth of the Earliest Vertebrates

Speaker: Dr Howard Armstrong, University of Durham

Tullie House Museum, Carlisle

Wednesday, 16th March

EAST MIDLANDS GEOLOGICAL SOCIETY

John Wolf e-mail: sec@cmgs.org.uk or www.emgs.org.uk.

A very big fish records the Jurassic climate

Speaker: Dave Martill, University of Portsmouth

Saturday, 23rd April

HUDDERSFIELD GEOLOGY GROUP

Julie Earnshaw (Secretary). Telephone: 01484 311 662 or e-mail: earniehome@ntlworld.com

The Namurian Basin of the West of Ireland

Speaker: Phil Robinson, Greenhead College, Room F8, 7.15pm

Monday, 11th April

HULL GEOLOGICAL SOCIETY

Mike Horne. Tel: 01482 346 784 (after 7.30 pm)

or e-mail: m.j.horne@hull.ac.uk or www.go.to/hullgeolsoc

The Oil Industry and AGM

Speaker: David Hall

Thursday, 17th March

Holderness Coast field trip with Hull University Science Club

Leaders: Barrie Heaton, Nigel Whittington and Stuart Jones

Saturday, 7th May

LEEDS GEOLOGICAL ASSOCIATION

Anthea Brigstocke (General Secretary). Tel: 01904 626 013.

E-mail: abrigstocke@hotmail.com or www.leedsgeolassoc.freereserve.co.uk

National Science Week

The Extraordinary Life and Work of Alfred Wegener

Speaker: Dr Clare Dudman, University College, Chester. Author of "Wegener's Jigsaw".

Thursday, 17th March

Water Water Everywhere (Proglacial Lakes in the Vale of York and Beyond)

Speaker: Dr. Mark Bateman, University of Sheffield

Thursday, 21st April

LEICESTER LITERARY & PHILOSOPHICAL SOCIETY

Chairman: Andrew Swift. Tel: 0116 252 3646 or e-mail: as48@le.ac.uk

AGM & Chairman's Address: Eight and a half years in the trenches

Speaker: Andrew Swift, Department of Geology, Leicester University

Wednesday, 23rd March

MANCHESTER GEOLOGICAL ASSOCIATION

Jane Michael. Tel: 0161 366 0595, e-mail: jammyjane@aol.com or www.mangeolassoc.org.uk

Afternoon Seminar - Living with Volcanoes

Saturday, 19th March

Anatomy of a crisis: the Montserrat Volcanic Emergency 1995-1999

Speaker: Dr Peter Kokelaar, University of Liverpool

Emplacement and Environmental Impact of Flood Basalt Volcanism

Speaker: Professor Steve Self, The Open University

Listening to Volcanoes

Speaker: Dr Jurgen Neuberg, University of Leeds

The use of remote sensing and other techniques to improve our understanding of how volcanoes work

Speaker: Professor Harry Pinkerton, University of Lancaster

NORTH EASTERN GEOLOGICAL SOCIETY

Frank Trowbridge. Tel: 01642 582 786, e-mail: frank.trowbridge@care4free.net
or www.northeast-geolsoc.50megs.com

AGM

Friday, 18th March

Probably some considerable discussion about the future of N.E.G.S.

Therefore, if time permits, some geological videos will be shown

WESTMORLAND GEOLOGICAL SOCIETY

Mrs P. M. Wilson. Tel: 01539 533 198 or www.wgso.fsnet.co.uk

AGM & Presidential Address

Wednesday, 16th March

Speaker: Dr. Stuart K. Munro

Start: 7.45pm

OTHER SOCIETIES OF INTEREST**EAST MIDLANDS REGIONAL GROUP OF THE GEOLOGICAL SOCIETY**

Ed Hough e-mail: eh@bgs.ac.uk

LANCASHIRE GROUP OF THE GEOLOGISTS' ASSOCIATION

Norman Catlow. Tel: 01772 727 577 or e-mail: norman@catlow4736.freeseve.co.uk

NORTH EAST YORKSHIRE GEOLOGY TRUST

Mike Windle. Tel: 01947 881000, e-mail: contact@neyorksgeologytrust.com

SORBY NATURAL HISTORY SOCIETY

Ken J Dorning. www.shu.ac.uk/city/community/sorby/secgeo.shtml

YORKSHIRE REGIONAL GROUP OF THE GEOLOGICAL SOCIETY

Isla Smail. Tel: 0113 242 8498, e-mail: isla.smail@arup.com

SUBMISSION OF PAPERS

Manuscripts for publication in the Proceedings should be submitted to *'The Editors, Proceedings of the Yorkshire Geological Society, Geological Society Publishing House, Unit 7, Brassmill Lane Enterprise Centre, Brassmill Lane, BATH, BA1 3JN'*. Typescripts should be prepared using the updated instructions for authors given on the inside back cover of the latest issue (Volume 55 Part 2, November 2004).

Publication of manuscripts may be expected in the next, or next but one part, following acceptance. The proceedings will be abstracted and/or indexed in, *GeoArchive, GeoRef, Geobase, Geological Abstracts and Mineralogical Abstracts, Research Alert and Science Citation Index Expanded (SCIE)*.

COPY FOR CIRCULAR

The next indoor meeting will be held on 8th October 2005. Open Questions in East Yorkshire geology: 100 years after Lamplugh, University of Hull.

Copy deadline for Field Guide Circular 524 is the 19th April 2005.

Copy deadline for Circular 525 is the 12th September 2005.

GENERAL SECRETARY

Trevor Morse, Ph.D. 19 Thorngate, Barnard Castle, DL12 8QB

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