

# YORKSHIRE GEOLOGICAL SOCIETY

President: Martin Whyte Ph.D



## EROSION OF NORTHERN BRITAIN

14.00 - 17.00 Saturday 29th March 2008

BGS, Keyworth, Nottingham NG12 5GG  
(Joint meeting with East Midlands Geological Society)

# EROSION OF NORTHERN BRITAIN

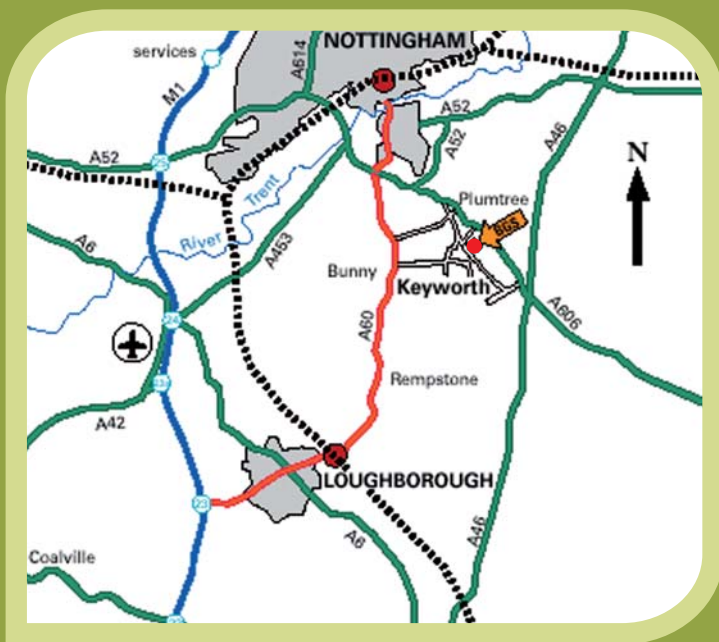
14.00 - 17.00 Saturday 29th March 2008

Speakers: Gareth Jenkins, Anthony Cooper, Claire Foster & Joseph Quinn

BGS, Keyworth, Nottingham NG12 5GG

(Joint meeting with East Midlands Geological Society)

*Please Note: Articles and opinions published in the YGS Circular reflect the view of the individuals writing those parts of the Circular and in no way necessarily reflect the view of Council or of the Society as a whole.*



● Meeting venue.

Front cover: Coastal erosion, Holderness, North Yorkshire  
© Joseph Quinn



# EROSION OF NORTHERN BRITAIN

14.00 - 17.00 Saturday 29th March 2008

- 13.00 - 14.00**    **The BGS Shop will be open**  
25% off BGS Publications to YGS Members
- 14.00 - 14.05**    **Introduction and Society Business**  
Martin Whyte, President
- 14.05 - 14.15**    **Introduction to talks**  
**Development of a predictive landslide tool at Hollin Hill, Yorkshire**  
Gareth Jenkins, British Geological Survey
- 14.15 - 14.55**    **Glacial, fluvial and karstic erosion of North-Eastern England**  
Anthony Cooper, British Geological Survey
- 14.55 - 15.45**    **Tea Break**
- 15.45 - 16.15**    **Landslide distribution and systems on the York I.50 000 geological sheet**  
Claire Foster, British Geological Survey
- 16.15 - 16.45**    **Recession of the Holderness coast, East Yorkshire**  
Joseph Quinn, University of Leeds
- 16.45 - 17.00**    **Closing Remarks**

## CONTINUOUS PROFESSIONAL DEVELOPMENT

This meeting counts as 2.5 hours of Continuous Professional Development under the Geological Society CPD Scheme.



## 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 who stay in Nottingham or West Bridgford can catch a bus to Keyworth, 'The Keyworth Connection', 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.



## MANCHESTER GEOLOGICAL ASSOCIATION

### Correction

It would seem that the piece in the last circular was incorrect. Just to clarify, it is the Geological Association of London that is 150 years old and not the Manchester Geological Association. As everyone well knows Manchester Geological Association are comparative new comers to the geology field and are only celebrating their 83rd birthday.



## INTRODUCTION TO TALKS

### DEVELOPMENT OF A PREDICTIVE LANDSLIDE TOOL AT HOLLIN HILL, YORKSHIRE

Gareth Jenkins, British Geological Survey, Keyworth, Nottingham NG12 5GG

The diverse landscapes of Northern Britain are testament to the erosive forces that have shaped them. They range from the high peaks of the Lake District, the North York Moors and the Pennines to the rolling hills of the Yorkshire Wolds. The landscape is drained and downcut by rivers such as the Tees, the Ouse, and the Nidd as they meander their way towards the coast. At the coast, the landscape of Northern Britain ranges from the high Jurassic cliffs around Whitby, to the low Till cliffs of Holderness, down to the flooded valleys of the Humber and Solway Firth.

The order of the talks for the indoor meeting work their way from the high mountains, down the valley sides and out along the river plains to the coast. Subsequent to tectonic events, the Anglian and Devensian glaciations ultimately shaped the landscape of Northern Britain. They carved out the valleys and dales and strongly influenced the present-day drainage patterns. Following the retreat of glaciers from Northern Britain, the exposure and removal of support from slopes coupled with a harsh, wet climate resulted in a period of high landslide activity. These landslides are on a scale far larger than any processes occurring today in Northern Britain. The most recent erosive threat to emerge is that of sea level rise and associated coastal erosion. No better is this demonstrated than along the Holderness coast, where coastal recession figures are amongst the highest in Europe.

The BGS is in the process of setting up a field laboratory at Hollin Hill, near Terrington in North Yorkshire, investigating the processes and evolution of an active landslide on a slope underlain by Lower Jurassic geology. The project is multi-disciplined and utilises a variety of techniques including aerial LiDAR and terrestrial LiDAR to monitor geomorphological changes, and Electrical Tomography (ET) and Self Potential (SP) to monitor groundwater distribution and movement. By combining these techniques, it is hoped that the work will provide a predictive tool for landsliding in Lower Jurassic sedimentary successions.

# GLACIAL, FLUVIAL AND KARSTIC EROSION OF NORTH-EASTERN ENGLAND

Anthony Cooper, British Geological Survey, Keyworth, Nottingham NG12 5GG

The erosion of Britain has been largely controlled by a balance of sea level fluctuations, uplift and climate combined with glacial, fluvial, weathering and karstic processes. The large-scale driving force has been climatic, causing sea level fluctuations of 120m from ice-ages with low sea levels to interglacial periods with high sea levels. Stripping off the mainly Devensian superficial deposits reveals bedrock elevation information that elucidates the pre-Devensian and early Devensian drainage pattern. During, and subsequent to, the Devensian glaciation, northern Britain was subjected to widespread glacial erosion. This is evidenced by the ice-fluted landscape visible on Digital Elevation Models, glacial striations on bedrock at the base of the glacial till and the distribution of erratic material. Synchronous with the advancing glaciation, the lowering of sea level caused intense down-cutting of the pro-glacial fluvial systems. The ice advance also blocked many of the pre-glacial fluvial systems causing their diversion into marginal glacial drainage valleys and gorges (such as Knaresborough and Boston Spa) many of which form part of the current drainage pattern. The drainage from the Devensian ice-sheet has strongly influenced the course of some rivers including the River Ouse, which runs near to where glacial drainage once flowed. Once initiated, this river course has remained in use and eroded into the soft pro-glacial lake deposits in the southern part of the Vale of York. Of small impact, compared with the main erosive forces, dissolution of the limestone and gypsum lithologies has resulted in karstic lowering of the landscape. It has also formed subterranean cavities that collapse to form surface dolines. In recent times man's use

of resources has become a major erosive force that has lowered large areas faster than natural erosion.



Knaresborough Gorge viewed from Knaresborough Castle showing the narrow gorge cut when the River Nidd was diverted by ice during the last Ice-Age.

# LANDSLIDE DISTRIBUTION AND SYSTEMS ON THE YORK 1:50 000 GEOLOGICAL SHEET

Claire Foster, British Geological Survey, Keyworth, Nottingham NG12 5GG

Recent remapping of the BGS 1:50 000 geological map of York highlighted that landslides were more extensive across the region than were previously known.

The scale and variety of landslides warranted a special *landslide survey* alongside the 'conventional' geological mapping. This study formed part of the ongoing British Geological Survey work into mapping, investigating and recording landslides and landslide systems across the country. The systematic survey of landslides will lead to a better understanding of landslide occurrence, processes and hazards across Great Britain, as well as contribute to our understanding of landscape evolution.

Using techniques including Socetset analysis of aerial photographs, analysis of NextMap and field survey, it was possible to identify and describe over 70 new landslides as well as three distinct landslide systems. The study also meant the discovery of large scale landslide features on the Chalk. These are on a scale previously undescribed away from the coast in Britain and represent the influence of Quaternary processes on the landscape of Northern England.



Birdsall Brow Landslide, nr Malton, North Yorkshire. © Claire Foster.

# RECESSION OF THE HOLDERNESS COAST, EAST YORKSHIRE

Joseph Quinn, University of Leeds

The Holderness coastline is located within the East Riding of Yorkshire, where the cliffs are predominately composed of glacial clay. This stretch of coastline has historically received considerable attention in the published literature due to its high rate of recession, which is known to be amongst the most rapid in Europe. Since the late Nineteenth Century many attempts have been made to determine accurately the rate and mechanisms of this recession, however this has resulted in the existence of numerous conflicting accounts. Therefore a comparison of previous recession rate assessments is presented together with an overview of current research in this region. This discussion continues with an assessment of the manner in which this coastline retreats and the type of landsliding that occurs.

Results of cliff recession monitoring, using Global Positioning Systems (GPS), terrestrial laser scanning, digital photography and Geographical Information Systems (GIS) are displayed, which reveal a predominance of essentially translational landslides in the areas studied. It is shown how the results of these sophisticated monitoring methods can be combined with numerical modelling to gain a greater understanding of the processes involved in coastal recession. Finally, the results of this surveying are compared with published case studies of other coastal areas consisting of glacial or overconsolidated clay cliffs in order to assess similarities.



Coastal erosion, Holderness, North Yorkshire. © Joseph Quinn.

## A WORD FROM THE PRESIDENT

Martin Whyte



Both this Circular and the last Circular have included items contributed by Members and I am pleased to see this as it is something that Council would like to encourage. The Circular and the Web Site are important ways in which we can all share information and generate discussion. Increasing involvement by Members is also one way in which we can see the strength of our Society.

Unfortunately University duties meant that I missed the Field Meeting to Dimlington and Sewerby, which was held last October and which apparently inspired last month's contribution. I do know from visits with students that the

Sewerby Buried Cliff site has been better exposed within the last year than it has been for many years. I regularly take students there on an Easter Field Course because of the interesting nature of, and the importance of, the relationships displayed there. My first visit to the Buried Cliff section was made with Lewis Penny soon after I moved to Yorkshire and I have also visited it on an earlier YGS Field Meeting, which John Catt led for the Society during its sesquicentennial celebrations in 1988. On that occasion, when we were in the field and when John was explaining the relationships which he had observed but which could not then be seen, he mentioned that he had demonstrated these relationships to the Society at a Field Meeting in 1964. Immediately a number of those present, including Professor John Hemingway, revealed that they had also been present on that earlier occasion. Two things impressed me about this. Firstly I was impressed by the way in which these Members all fully supported John's observations and his interpretation of the exposures. Professor Hemingway even noted how well cemented the beach deposit had been and how interesting it had been in thin section. Secondly and even more impressive was the sudden insight into the great reserve of knowledge and experience that resides within the Society's Membership and how this is enriched by the Society's own activities. It is vital for our science that we should be questioning and testing and debating relationships and other aspects of geology and our Society, through all its publications and activities including not least the Circular and the Web Site, should be an important forum for this.

It is something of a shock to realise, as I write this, that it is twenty years since the Society celebrated its sesquicentenary. This year is the 150th Anniversary of the founding of the Geologists' Association. I am sure that you will all join with Council and myself in congratulating them on their sesquicentenary and in wishing them all the best for their celebrations and for the future.



## THE AGE OF THE BASEMENT TILL: A REPLY

John A. Catt

Derek Gobbett (Circular 543) is right to draw attention to the uncertain age of the Basement Till, and I am grateful for his thoughts on the matter. But I still feel the present balance of evidence in eastern England as a whole does not favour the Devensian age he suggests. As I tried to explain in my paper (Catt, 2007), the amino acid racemization dates obtained by Eyles et al. (1994) on shells from the Basement at Dimlington conflict with the stratigraphic evidence from at least three other east coast sites, Sewerby (Yorkshire), Welton-le-Wold (Lincolnshire) and Warren House Gill (Durham). Derek ignores the last two of these, but as he questions the evidence from Sewerby, I will consider that site first.

The Sewerby shore exposures were witnessed only once, in 1963, as recorded by Catt and Penny (1966). Regrettably they have not been seen since, so I admit the interpretation there is tentative. However, the calcreted beach deposit seen overlying the Basement cannot be Holocene in age, as Derek suggests, because the 1963 exposures clearly indicated that it is overlain by the Late Devensian chalk rubble (gelifluction deposit). On this evidence alone, one could perhaps attribute it to an earlier Devensian marine transgression, but that is unlikely because (a) the fragmentary shells in the calcreted beach are typical temperate (interglacial) species, the same as those recorded in the uncemented Ipswichian beach usually visible in the present cliff 125 metres to the north, and (b) sea levels were almost certainly much lower than the Sewerby shore exposures throughout the Devensian.

At Welton-le-Wold, a till lithologically very similar to the Basement (the Welton Till) is overlain by the very chalky Calcethorpe Till, which is universally regarded as part of the Older Drift (pre-Ipswichian) sequence of Lincolnshire. So, unless the identification of the Calcethorpe Till as an *in situ* glacial deposit is incorrect, the Welton Till must be part of the Older Drift and not Devensian.

In Co. Durham, according to Trechmann (1952), the Warren House Till (also lithologically similar to the Basement) was so strongly weathered after deposition that larvikite and other boulders in its upper part were fully decomposed. I have never seen the weathered boulders, but Trechmann's account certainly suggests interglacial weathering rather than alteration under cooler conditions at any time in the Devensian. So the Warren House Till is probably pre-Ipswichian, and if it is correctly correlated with the Basement again indicates that the latter is older than Devensian.

I regard the Devensian amino acid dates reported by Eyles et al. (1994) as an unreliable indication of the age of the Basement Till for two reasons. First, as stated in my paper, there is the possibility that Devensian shells were intruded into the upper layers of the Basement during proglacial disturbance or subglacial deformation by the Late Devensian (Skipsea Till) glacier. Second, recent work by Kirsty Penkman at York University has shown that the amino acids in fossil shells often give unsatisfactory dates because they are part of an open system

and therefore subject to post-depositional leaching, contamination and other environmentally influenced modifications. To overcome these problems it is necessary to extract and study the small fraction of shell protein preserved since death within the closed system of the shell's carbonate crystals. Earlier results obtained before introduction of this protocol were subject to unknown errors and are probably best ignored.

I must also take issue with Derek for appealing to Ockham's razor in deciding the age of the Basement. As has often been shown in natural science, the razor is a potentially dangerous approach, because it encourages the subjective drawing of premature conclusions from inadequate evidence. William of Ockham lived at a time (the early 14th century) when, under theological influences, nature was regarded as simple; consequently it was thought the simpler an explanation about nature, the more likely it is to be true. But in later centuries scientists have become increasingly aware that nature is in fact highly complex. This is certainly true in Pleistocene geology. Even less than a century ago, monoglacialisists such as G.W.Lampugh could well have justified their view using Ockham's razor; but more recent evidence from oceanic, loess and lacustrine successions has shown that there were at least fifty glaciations over the last 2.6 Ma. The 'simplest hypothesis', as recommended by Derek, should not be blindly preferred by ignoring part of the evidence. Walter of Chatton, a contemporary of William of Ockham, changed the philosophical emphasis by proposing a counter-hypothesis or anti-razor (Maurer, 1984): 'if three things are not enough to verify an affirmative proposition about things, a fourth must be added, and so on'. To me this seems much closer to modern scientific method. As with many other scientific problems, we must continue gathering evidence about the age of the Basement Till until a universally agreed answer is obtained.

### References

- Catt, J.A. 2007. The Pleistocene glaciations of eastern Yorkshire: a review. *Proceedings of the Yorkshire Geological Society* **56**, 177-207.
- Catt, J.A. and Penny, L.F. 1966. The Pleistocene deposits of Holderness, East Yorkshire. *Proceedings of the Yorkshire Geological Society* **35**, 375-420.
- Eyles, N., McCabe, A.M. and Bowen, D.Q. 1994. The stratigraphic and sedimentological significance of Late Devensian ice sheet surging in Holderness, Yorkshire, U.K. *Quaternary Science Reviews* **13**, 727-759.
- Maurer, A. 1984. Ockham's razor and Chatton's anti-razor. *Medieval Studies* **46**, 463-475.
- Trechmann, C.T. 1952. On the Pleistocene of East Durham. *Proceedings of the Yorkshire Geological Society* **28**, 164-179.



## ENI GEOLOGICAL CHALLENGE FOR 2007

Two YGS members have recently been awarded the Runners-up trophies in the ENI Geological Challenge for 2007 (sponsored by the Italian oil company, ENI). The stated aim of the award is “to recognise the achievements of individuals or groups in the field of conservation, interpretation or field geological education in the UK.”

YGS member, Paul Kabrna, was successful with his recently published book “*John Milne - the man who mapped the shaking earth*”. John Milne became known as the ‘Father of Modern Seismology’. They even called him ‘Earthquake Milne’. He was a hero in Japan and lauded around the world although nowadays he’s generally remembered only by seismologists. He was much more than just a foreign lecturer, mining engineer, geologist and seismologist. Milne was one of the great Victorian pioneers.

The other Runner-up award was gained by the Geology Group of the Friends of the Porter Valley (Sheffield), led by YGS member Peter Kennett. The entry comprised several strands: two full 45 page Reports (“*The Geology of the Porter Valley - what lies beneath our feet?*” and “*Mining and quarrying in the Porter Valley - delving into the past?*”); two free leaflets with the same titles: a 1:10000 geological map, compiled by the group from unpublished archive maps at the British Geological Survey; several led walks in the Valley; several lectures to local interest groups. For good measure, the group also threw in the previously published leaflet, “*Reading the landscape in the Porter Valley*”, since it contains a minor geological element.

The winner was the Shropshire Geology Society who had developed a website on the geology of the county.



## YGS WEB SITE

If you are a member of the YGS and think that the YGS website just repeats what is in the circular; then please think again!

Patrick has been working hard to produce a site that has so much more information on it than could possibly be published in the circular. Included on the site are 135 years worth of searchable indexes of the Proceedings and several years of back issues of the YGS circular. If you don't check out the website on a regular basis you are missing out on a treat as well as so much information. The address is [www.yorksgeolsoc.org.uk](http://www.yorksgeolsoc.org.uk).



## NEW MEMBERS

Mr William R. Stephenson  
Mr Mike Soulsby

Stockton on Tees  
West Bridgford, Nottingham

Ordinary membership  
Ordinary membership



## GEOLOGY OF EIGG

Geology and Landscape in the Inner Hebrides  
17th to the 22nd May 2008

Professor John Hudson is leading a course on the Geology and Landscape in the Inner Hebrides from 17th to the 22nd May 2008 (inclusive) based at the Glebe Barn on the Isle of Eigg. John will be accompanied by a knowledgeable botanist, to add a different dimension to the trip.

There are still a few places available. If you are interested details are to be found on the Glebe Barn website [www.glebebarn.co.uk](http://www.glebebarn.co.uk) or from the following contact Karen Helliwell, Cleadale, Isle of Eigg, Scotland, PH42 4RL. **Telephone 01687 482417.**



## YORKSHIRE GEOLOGY MONTH

May 2008

We have been asked to mention Yorkshire Geology Month which takes place in May of this year. The YGS will again be taking a full and active part in this with John Knight leading a field trip to The Middle Craven Fault and surrounding area. If you wish to see what other events are on the organisers have a website on [www.yorkshiregeologymonth.com/events](http://www.yorkshiregeologymonth.com/events). At the time of going to press the information was for last year, though we understand that this will be updated very soon. If you can't wait for that to happen you can ask for details by email on [festival@yorkshiregeologymonth.com](mailto:festival@yorkshiregeologymonth.com).



## CORRESPONDING SOCIETIES

Contact society representatives for the latest information

### **CRAVEN & PENDLE GEOLOGICAL SOCIETY**

Contact: Paul Kabrna e-mail: paul\_kabrna@hotmail.com or [www.cpgs.org.uk/](http://www.cpgs.org.uk/)

Venue: Rainhall Centre, Barnoldswick.

#### **Rapid climate change and glacial growth in NW Scotland**

**Friday 4th April**

Deborah McCormack BSc., Manchester University

### **CUMBERLAND GEOLOGICAL SOCIETY**

Contact: Nigel Courtman, tel. 01229 861 478 or [www.cumberland-geol-soc.org.uk](http://www.cumberland-geol-soc.org.uk)

### **EAST MIDLANDS GEOLOGICAL SOCIETY**

Janet Slatter; tel. 01509-843.297; e-mail: [sec@emgs.org.uk](mailto:sec@emgs.org.uk) or [www.emgs.org.uk](http://www.emgs.org.uk)

Venue: Lecture Theatre B3, Biological Sciences Building, University of Nottingham

#### **Midlands influences on William Smith**

**Saturday 19th April**

Dr Peter Banham MBE, Royal Holloway University of London

### **HUDDERSFIELD GEOLOGY GROUP**

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

#### **Knockan Cliff and the unaltered Foreland**

**Monday 7th April**

Brian Farrington, Huddersfield Geology Group

### **HULL GEOLOGICAL SOCIETY**

Mike Home. Tel: 01482 346 784 or e-mail: [m.j.horne@hull.ac.uk](mailto:m.j.horne@hull.ac.uk) or [www.go.to/hullgeolsoc](http://www.go.to/hullgeolsoc)

Venue: Department of Geography, University of Hull, at 7.30pm.

#### **Hayburn Wyke**

**Saturday 10th May**

David Hill

### **LEEDS GEOLOGICAL ASSOCIATION**

Anthea Brigstocke (General Secretary). Tel: 01904 626 013; E-mail: [abrigstocke@hotmail.com](mailto:abrigstocke@hotmail.com) or [www.leedsgeolassoc.freereserve.co.uk](http://www.leedsgeolassoc.freereserve.co.uk) Venue: Mathematics & Earth Sciences, University of Leeds)

#### **Carbon Dioxide Capture and Storage: a Strategy to Mitigate Global Warming**

**Thursday 17th April**

Dr Andy Chadwick, BGS Keyworth

### **LEICESTER LITERARY & PHILOSOPHICAL SOCIETY SECTION C (GEOLOGY)**

Chairman: Dr Joanne Norris. Tel: 0116 283 3127, e-mail: [j.e.norris@ntlworld.com](mailto:j.e.norris@ntlworld.com), [www.charnia.org.uk/](http://www.charnia.org.uk/)

Venue: Ken Edwards Building, University of Leicester

### **MANCHESTER GEOLOGICAL ASSOCIATION**

Jane Michael. Tel: 0161 366 0595, e-mail: [outdoor@mangeolassoc.org.uk](mailto:outdoor@mangeolassoc.org.uk) or [www.mangeolassoc.org.uk](http://www.mangeolassoc.org.uk)

Venue: Williamson Building, Department of Geology, University of Manchester

#### **In Celebration of the Carboniferous - the Manchester Connection**

**Saturday 12th April**

A day of lectures



## CORRESPONDING SOCIETIES

Contact society representatives for the latest information.

### **NORTH EASTERN GEOLOGICAL SOCIETY**

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

### **ROTUNDA GEOLOGY GROUP**

Sue Rawson. Tel: 01723 506502, e-mail: suerawson@yahoo.co.uk  
Venue: Room CG7, Scarborough Campus of the University of Hull, Filey Road, Scarborough. 7.30pm

### **The Speeton Clay of Filey Bay:**

**Thursday 3rd April**

### **it's regional and global significance**

Professor Peter Rawson, Scarborough Museums Trust

### **NORTH STAFFORDSHIRE GROUP OF THE GEOLOGISTS' ASSOCIATION**

Eileen Fraser Tel: 01260 271505 email: fraser@fraserco.co.uk or www.esci.keele.ac.uk/nsgga/  
Venue: School of Earth Sciences and Geography, University of Keele

## **OTHER SOCIETIES OF INTEREST**

### **WESTMORLAND GEOLOGICAL SOCIETY**

E-mail: mail@westmorlandgeolsoc.org.uk , westmorlandgeolsoc.org.uk/  
Venue: Shakespeare Centre, Kendal

### **EAST MIDLANDS REGIONAL GROUP OF THE GEOLOGICAL SOCIETY**

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

### **SORBY NATURAL HISTORY SOCIETY**

Sorby Geological Group Secretary Ken J. Doring: geology@sorby.org.uk  
www.sorby.org.uk/grpgeo.shtml www.sorby.org.uk

### **YORKSHIRE REGIONAL GROUP OF THE GEOLOGICAL SOCIETY**

Isla Smail. Tel: 0113 242 8498 or 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 56 Part 4, November 2007).

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

Copy deadline for Circular 545 is the 4th April 2008

Copy deadline for Circular 546 is the 22nd August 2008

### NEXT YGS MEETINGS

The next Indoor Meeting

27th September 2008 - Rigs and the Role of the Amateur in Geological Site Preservation

The next Field Meetings

11th May 2008 - Yorkshire Geology Month, Middle Craven Fault, John Knight

18th May 2008 - Northern Rock Festival, Harehope Quarry, Trevor Morse

### CONTACTS

#### GENERAL SECRETARY

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

e-mail: [tjm4@tutor.open.ac.uk](mailto:tjm4@tutor.open.ac.uk)

#### MEMBERSHIP SECRETARY

Ms Chris Jennings-Poole B.Sc., 6 Wolsey Drive, Norton, Stockton on Tees, TS20 1SY

e-mail: [chrisjpoole@hotmail.co.uk](mailto:chrisjpoole@hotmail.co.uk)

#### CIRCULAR EDITOR

Keith Park, B.Sc. (Hons), 24 Ings Lane, Guiseley, West Yorkshire LS20 8DA

Telephone: (Work) 0113 278 4286 (Home) 01943 878787

e-mail: [ygsircular@btinternet.com](mailto:ygsircular@btinternet.com)