



The
Geological
Society

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West Midlands Regional Group

Newsletter

August 2013



Committee News

Welcome back for a new season of talks and events brought to you by the West Midlands Regional Group.

The Committee at the commencement of this season comprises the following:

Dr Clive Roberts, Chair (Wolverhampton University)
Dan Welch, Secretary (SITA UK)
Adrian Collings, Treasurer (ARUP)
Verity Smith, Chartership Officer (Atkins)
Dan Jefferies (Atkins)
Neil Cooper (URS)
Graham Worton (Dudley Museum)
Sarah Worton (Atkins)
Richard Mitchener (Atkins)

2012-2013

The Committee faced some daunting decisions last summer over the types of talks we should offer and where we should hold them.

Unlike some of our neighbouring Regional Groups who frequently have to balance the costs of bigger more central venues, our Group benefits greatly from long-standing relationships with both the Universities of Birmingham and Wolverhampton.

However, like our neighbours it is equally important that we are able to justify our costs to Burlington House.

It was clear that our traditional programme of talks on purely geological subjects was not attracting attendees in the numbers that they once were and ultimately, we decided to bin-off those lectures and replace them with a more CPD, specialism-focused season following the results of a GSL founded survey which highlighted that the top 5 popular areas of expertise were:

1. Engineering	39%
2. Contaminated Land	35%
3. Geotechnics	32%
4. Hydrogeology	31%
5. Environmental Scientists	28%

In terms of Specialist Group Affiliations, the top three preferences are:

1. Engineering Group	49%
2. Hydrogeology Group	44%
3. Environment Group	42%

Happily, not only has the average number of attendees soared from a worrying dozen to over an average of 60 (with up to 80 in February), but the total number of geologists reporting an affiliation to the Group has climbed from approximately 650 to 800 people!

For our first talk on Medical Geology we went straight in at the deep end with an amended 'meet and greet' in the Lapworth Museum and coupled this with the clean and bright Earth Imaging Laboratory at The University of Birmingham. We were very impressed, and a bit relieved, with the attendance for this event!!

The second joint lecture was held in Shrewsbury. When suggested initially, concerns were expressed about whether Shrewsbury had been neglected for too long in previous seasons. Would anyone come along? Things were not looking too well. Not having a talk in the town in a long time, finding a suitable venue was proving challenging. A corner was finally turned when Mike Streetly at ESI Ltd kindly offered the use of their office space and part hosted the eventual talk on Severn Trent's Low Flow Investigations. Happily the talk was a rousing success.

2012 was rounded off at the Lapworth Museum and EIL with a very enjoyable talk on Wine, Whisky and Beer: The Role of Geology by the aptly named Professor Alex Maltman (Aberystwyth University).

Bill Gaskgarth was back in January to give his annual presentation to those within the Group who may be seeking to attain Chartership with the GSL but we sought to better this with add-on talks from the recently Chartered and the not so recently Chartered but equally important Mentors and Scrutineers.

This year, Verity Smith will be looking to take things a further step forward with additional Chartership Workshops should people wish. So, if you would like to express interest in potential Workshops, contact verity.smith@atkinglobal.com

In February Martin Culshaw (BGS/University of Birmingham) asked us the question 'How Safe is the UK?'

Over 60 people attended with Martin explaining in graphic detail the difference between 'hazard' and 'risk', gave examples of the types of impact these hazards can have on us and made suggestions made as to how geological hazards can be mitigated and the risks reduced. A thoroughly enjoyable evening, we again pass our thanks to Martin.

Website: www.geolsoc.org.uk/wmrg

Email: geolsoc_wmrg@live.co.uk

Our spring lectures required amendment with Dr Russell Thomas (Parsons Brinkerhoff) stepping into the breach with his talk on Environmental Forensics.

Peter Dumble (Waterra In-Situ) and Zoe Cooper and Amy Parekh-Pross (ESG) presented a broad ranging evening on groundwater sampling and advances in analysis - both important subjects across numerous geo-science disciplines.

Our final lecture of the season at Wolverhampton University was hosted by David Banks (Holymoor Consultancy) on the topic of Thermogeology. Finding the lecture theatre was somewhat of a challenge, not aided by the University Security locking the building prematurely, but when found the facilities provided were excellent.

We wish to thank again all the speakers who made our programme last year and hope you enjoy the programme for the up and coming year.

All of last years talks qualify towards Continued Professional Development (CPD) but only a limited number formally approached the Secretary for a certificate of attendance. Don't miss out this year!

2013-2014

This season we have tried to work more closely with our neighbouring Regional Groups to offer a wide range of talks - and not least prevent double-booking and repetition.

Keiron Finney kicks off the season at the Lapworth Museum in October with a Case Study looking at the 'The Use of Quarried Stone as a Leachate Drainage Media'.

Our November talk will, for the first time, be at the University of Wolverhampton's Telford Campus in the hope of tempting a few more of the hydrogeologists out from the safety of Shrewsbury and just for good measure, it's on the topic of the 'Helpston Groundwater Remediation Project'.

The year will be rounded off with a talk by Steve Wilson on 'Developments in Ground Gas Risk Assessment' and brought in a-new in January with an evenings aimed at recognising those in their early careers- the Colin Knipe Early Career Geologist Award 2014.

Bill Gaskarth returns for his annual evening devoted to Chartership, Mentoring and Scrutineering in February.

We will also be putting on additional Workshops to aid those seeking Chartership with their CPD Records and eventual submissions.

A pure geological talk under the guise of the Diary of a 60Ma Magma Chamber has manage to sneak into April - but it seems every Regional Group wants something to do with Magma or Volcanoes in Spring!

Maybe the wealth of Ian Stewart programmes on the BBC recently has something to do with it or we just all want to be taken back to why we studied geology in the first place.

As ever, all of our evening lectures are free to attend for Geological Society London Members, with attendance also open to non members for which we invite you to donate a contribution of your choice.

As ever the programme may vary from that which we have planned. With all our best endeavours, there may be occasions when venues need rearranging, speakers may need to be rearranged due to unforeseen events, or dates may need slightly amending.

I would encourage all members to keep an eye on the Group's web page (www.geol Soc.org.uk/wmrg) which is updated regularly and will announce any revisions to the advertised programme.

Social Media

Just a reminder that you can also join our groups on **LinkedIn** and **Facebook**.

We try and keep these sites up to date with information regarding meetings and other relevant interesting geological discussions. Both have their pros and con's; Facebook provides a better events listing, though LinkedIn provides a better platform for discussion.

The total number on these is still less than a quarter of the total within the Group mailing list, but we have found that the majority appear to have joined the LinkedIn service; though no one is contributing (yet).

If you have any comments or questions regarding the Group or the Talks Programme, please feel free to make contact using the details provided below.

Regards,
Daniel Welch
West Midlands Regional Group Secretary



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West Midlands Regional Group

Programme

2013 / 2014

Date & Time	Title & Speaker	Venue
Saturday & Sunday 28/29 September 2013 18:30	Dudley Rock and Fossil Festival 2013 Including Presentation of Awards for Photographic Competition 2013	Dudley Museum & Art Gallery
Tuesday 15 October 2013 18:30	CASESTUDY: The Use of Quarried Stone as Leachate Drainage Media <i>(An Anonymous Site in the Middle East)</i> Keiron Finney – Director, Exea Associates Ltd	Lapworth Museum of Geology
Tuesday 12 November 2013 18:30	Helpston Groundwater Remediation Project Leon Warrington – Hydrogeologist, Hydrock Consultants	UoW Telford Campus
Tuesday 10 December 2013 18:30	New Developments in Ground Gas Risk Assessment Steve Wilson – Technical Director, (EPG) To be followed by brief AGM	Lapworth Museum of Geology
Tuesday 14 January 2014 18:30	Early Career Award – Finalist Presentations <i>Hosted by West Midlands Regional Group</i>	Lapworth Museum of Geology
Tuesday 11 February 2014 18:30	Chartership Evening Dr Bill Gaskgarth – Geological Society London	Lapworth Museum of Geology
Tuesday 11 March 2014 18:30	Advanced Technologies for Contaminated Site Remediation Dr Jeremy Birnstingl – Managing Director, Regenesis	University of Wolverhampton Room TBC
Tuesday 8 April 2014 18:30	From Mantle to Mineralisation: The Diary of a 60 Ma Magma Chamber Brian O'Driscoll – Lecturer, Keele University	Lapworth Museum of Geology
Tuesday 13 May 2014 18:30	Monitoring Active Volcanoes Prof. Hazel Rymer – Lecturer, Open University	University of Wolverhampton Room TBC
June 2014 Time to be confirmed	SUMMER FIELD TRIP	Location TBC

Notes:

Lapworth Museum of Geology – Located within Earth Sciences at the University of Birmingham. Refreshments will be available in the Museum from 18:00, following which the talk will commence in the adjacent Earth Imaging Lab at 18:30.

Wolverhampton University – Located within Building MA on the South Campus, within the City Centre. Refreshments will be available from 18:00, with talks due to commence at 18:30.

UoW Telford Campus – Shifnal Road, Priorslee. Telford. Shropshire. TF2 9NN.

Event reminders will be circulated to members before each meeting. For further details/ enquiries, please contact the Group Secretary, Daniel Welch: geolsoc_wmrg@live.co.uk.

Where possible, these events may be considered for contributing to a recognised Continuing Professional Development (CPD) scheme as part of personal development. Delegates should check their individual scheme requirements.

Future Talk Abstracts – 2013

Tuesday 15th October 18:00 for 18:30
Lapworth Museum of Geology, Birmingham

The Use of Quarried Stone as Leachate Drainage Media on a Landfill Site in the Middle East

Keiron Finney (Director, Exea Associates Ltd)

An observational account of experiences at an anonymous Site from which the author wishes the audience to draw their own conclusions as to the appropriateness of different drainage media.

Keiron worked for the Environment Agency as a Technical Specialist and National expert in landfill gas, having experience on IPPC landfill sites and local authority sites. He currently works as a part-time lecturer at University of Wolverhampton, specialising in landfill gas and Anaerobic Digestion and for the rest of his time he concentrates his efforts on Exea Associates Ltd where he also specialises in Biogas and shale gas. This blend of work is complimentary as the academic/industrial mix is symbiotic. He is also working with Birmingham University in use of Proton Transfer Mass Spectra (PTMS) to analyse gases for exotic trace components and is working towards an Honorary Research Fellowship.

Tuesday 12th November 18:00 for 18:30
University of Wolverhampton TELFORD CAMPUS

The Helpston Groundwater Remediation Project

Leon Warrington (Hydrogeologist, Hydrock Consultants)

In the 1980's, two landfill sites at Helpston, near Peterborough, were used for the disposal of an agricultural pesticide called mecoprop.



This pesticide has since leaked into a principal aquifer, causing widespread pollution which is adversely impacting upon public water supplies.

The two former landfill sites (Ailsworth Road and Ben Johnsons Pit) have been designated as 'Special Sites' under Part IIA contaminated land regulations and are creating two distinct pollution pathways. The first pathway extends several kilometres north east of the site, polluting public water supply boreholes, while the second plume will potentially pollute a private water supply to the south-east if no remedial action is taken.

Helpston is the first "orphan" site which has fallen to the Environment Agency to remediate. Based on the Agency's principal aim for contributing to the objective for sustainable development, the target for remediation at Helpston is to reduce groundwater contaminant concentrations to acceptable levels by 2033.

This lecture will present an overview of the project, including geology, hydrogeology and contaminant distributions which have been assessed to build up a good conceptual understanding of the system. Particular attention will be given to the role of faulting with respect to groundwater movement, and the effects thereof on the conceptual model. An overview of the current remedial techniques will be given, along with the potential remediation methods going forward to reduce source concentrations to an acceptable level.

Leon graduated with an MSc in Engineering Geology from the University of Newcastle-upon-Tyne in 2007, later completing an MSc in Hydrogeology at the University of Birmingham. He currently works as a Hydrogeologist at Hydrock Consultants in Stoke and was awarded Third Place in the 2013 Colin Knipe Early Career Award with the above talk.

Tuesday 10th December 18:00 for 18:30
Lapworth Museum of Geology, Birmingham

New Developments in Ground Gas Risk Assessment

Steve Wilson (Technical Director, EPG)

Steve is a Chartered Engineer and Environmentalist with 30 years professional experience of geotechnical and environmental engineering. Steve has contributed to much of the UK guidance on ground gas assessment and remediation. He provides advice and designs for remediation schemes on gas affected sites around the world. He has successfully applied quantitative risk assessment to ground gas for both development and Part IIA sites over 20 years. He is co-author of the Local Authority Guide to Ground Gas and is currently a member of the drafting committee for a British Standard on ground gas investigation. He is also a member of the research team for a CIRIA project on the verification and integrity testing of gas protection systems.

Future Talk Abstracts – 2014

Tuesday 14th January 18:00 for 18:30
Lapworth Museum of Geology, Birmingham

Early Career Award – Finalist Presentations
Various Speakers

Tuesday 11th February 18:00 for 18:30
Lapworth Museum of Geology, Birmingham

Chartership Evening
Bill Gaskgarth (Geological Society London)
Verity Smith (Chartership Officer, WMRG)

The numbers of people applying for Chartership (CGeol and CSci) continues to grow.

As part of this annual evening, Bill will be on hand to provide his guide to the GSL's Chartership process to potential Applicants (present and future) and will be actively seeking to recruit more Mentors and Scrutineers.

Anyone who has been Chartered for five or more years may apply to become a Scrutineer, with their services called upon a maximum of twice per year.

Chartership applicants of all specialisms are encouraged to look for a Mentor within their employment organisation and to have him or her act as a Sponsor. Many candidates have found it impossible to locate an in-house Mentor and so have struggled to appreciate fully what is involved applying for Chartership.

Prospective CGeol candidates will likely to get a significant amount of useful information from this lecture to guide them through future Chartership applications.

So if you are considering; applying for Chartership through the Geological Society, mentoring someone who is, or would like to contribute to the society by becoming a Mentor or Scrutineer, we would recommend that you attend this informative evening.

The evening will also include two short talks from the point of view of an Applicant and a Scrutineer.

Tuesday 11th March 18:00 for 18:30
MA Building, University of Wolverhampton

Advanced Technologies for Contaminated Site Remediation
Dr Jeremy Birnstingl (Managing Director, Regenesis)

Tuesday 8th April 18:00 for 18:30
Lapworth Museum of Geology, Birmingham

From Mantle to Mineralisation: The Diary of a 60Ma Magma Chamber
Brian O'Driscoll (Lecturer, Keele University)

Tuesday 13th May 18:00 for 18:30
MA Building, University of Wolverhampton

Monitoring Active Volcanoes
Prof. Hazel Rymer (Lecturer, Open University)

The Colin Knipe Early Career Geologist Award 2013 Results

The West Midlands Regional Group would like to thank all members for their entries to the Early Career Award for 2013, the winners were:

Award Trophy + £100 Prize

Brian O'Driscoll (Lecturer in Igneous and Metamorphic Petrology, Keele University)
From Mantle to Mineralisation: The Diary of a 60Ma Magma Chamber

Second Prize + £40

Huw Clarke (Senior Geoscientist, Cuadrilla Resources Ltd)
Understanding the Real Issues about Shale Gas

Third Prize + £40

Leon Warrington (Hydrogeologist, Hydrock Consultants)
The Helpston Groundwater Remediation Project

Sadly, we were unsuccessful in getting an entrant through the draw for the National Final...maybe this year? Eventual winners of the National Early Career Award were:

Rosalind Pedder, Hydrogeologist (Southern Wales Regional Group Finalist)
Impeller Flow Logging In Fractured Crystalline Rock at a Proposed Open-Pit Mine Site

Owen Weller, Oxford University PhD Student (Thames Valley Regional Group Finalist)
Zircon: The Geological Time Keeper

The national Early Career Geologist award was launched back in 2012 in order to recognise the work of geoscientists in the early part of their careers. Regional Groups are responsible for organising regional heats – The Colin Knipe Award in our case – with the winner of which being entered into the draw for the national final, traditionally held in April at Burlington House.

Now in its third year, the GSL have been working behind the scenes to tweak how the award is run to make it as attractive and easy to take part in as possible. For our part, the WMRG have brought forward the annual presentations to January 2014 in order to afford the chosen finalist with enough time to prepare ahead of the National Final, should they be chosen.

Taking part is the perfect way to enhance your communication skills and demonstrate to an audience of peers your understanding of a particular geological topic. The format of the award is simple.

Don't take our word for it; hear from some of our previous winners:

Roz Pedder, winner in 2013

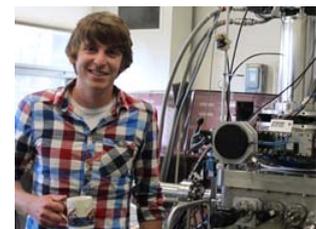
"It is great practice for public speaking and presenting scientific information, which all geoscientists will have done at some point in their career no matter what area they end up working in."

"The highlight for me was having the opportunity to present my work at the final to an audience of sixth form geologists and give them some idea of what you can do with a career in geology."

Owen Weller, winner in 2013

"I enjoyed the competition as it exposed me to the variety of science being done by geologists around the country. As a PhD student, it was particularly interesting to hear from those working in industry".

"I entered because I think it's important that scientists try to make their research as accessible as possible. I hope that the competition has shown my passion for scientific communication and that I can continue to share aspects of my research – measuring geological time- in the future".



Enter the The Colin Knipe Early Career Geologist Award 2014 NOW!!

There are a few rules. Entrants to this Regional Award must:

- Be Fellows or Candidate Fellows of the Geological Society, London;
- Have a maximum of 10 years post-graduate (bachelors or equivalent) experience and have not yet become chartered, and who;
- Live or work in the Geological Society's West Midlands Region of *Herefordshire, Worcestershire, Shropshire, Staffordshire, West Midlands and Warwickshire*.

That's it. It couldn't be easier! To enter, just prepare a written submission, of no more than 500 words, on a topic of your choice and submit to geolsoc_wmrg@live.co.uk

In recognition of the variety of careers and subjects that geologists get involved in, the only criteria is that the topic of the submission shall be geological/ geo-environmental in context and must be your own work. This could be your dissertation, a piece of research that interests you or a current project you're involved with at work.

Entries will be shortlisted to 3 Regional Finalists by a panel of Judges from the Committee. If you're successful, you will then be invited to give a short 15 minute presentation to the Judges and an audience of Committee and Regional Group Members on **Tuesday 14 January** at the Lapworth Museum of Geology. Five minutes will be allotted after the presentation for audience Q&A.

The Regional Winner will receive the Colin Knipe Trophy and a cash prize of **£100**. The first and second placed runners up will receive prizes of **£50** and **£30** respectively.

The Regional Winner will also then entered into the draw for the National Final to be held in mid-April 2014 at Burlington House, London with an opportunity for the winning entry to be presented in a Geoscientist Magazine article. If more than 4 Regional Winners are entered from across the country, the written submission will be used to shortlist the 4 National Finalists by a panel of Judges.

The National Early Career Geologist Award Final is held jointly with the National School Geology Challenge, aimed at A-level students. To reflect the different audience to the Regional Award, those reaching the National Final are asked to shorten their presentation to 10 minutes. The judging of the National Award will assess how you deliver geosciences information to a mixed audience from A-level upwards, rather than solely focussing on the technical content of your work.

Contact

For more information on this or any other event held by the West Midlands Regional Group of the Geological Society, please contact us at geolsoc_wmrg@live.co.uk or visit our website www.geolsoc.org.uk/wmrg.

PHOTOGRAPHY COMPETITION 2013

THE RESULTS

The West Midlands Regional Group would like to thank all members for their entries to this year's Photographic Competition.

Sadly, whilst we had a very good number of entries in the categories Geology in Motion and Creative/Abstract Geology, we didn't have enough entries in the categories Geology and the Midlands or Geology at Work to allow for the competition to proceed quite as advertised.

We have chosen a total of 6 winning images and 1 highly commended image from the two former categories mentioned above, to feature at the 2013 Rock and Fossil Festival at Dudley Museum & Art Gallery in September 2013:

CONGRATULATIONS to the following entrants:

Category: Geology in Motion

1st Place £50 Peter Twigg
"Glacier at Monte Rosa Massif. Zermatt, Switzerland"



2nd Place £20 John Schroder
"Volcanic activity. New Zealand"

3rd Place £10 Robyn Gillard
"Ripples at Low Tide. Loughor Estuary, Wales"



Highly Commended Jonathan Amos
"Glaciated Landscape. Inchnadamph, Assynt"

Category: Abstract/creative geology



1st Place £50 Peter Twigg
"Unconformity between ORS & Triassic Dolomitic Conglomerat"
Portishead, Avon

2nd Place £20 John Schroder
"Huge Concretion on the Beach. New Zealand"



3rd Place £10 Jonathan Amos
"Towering Spires (Feet) of Red Sandstone. Gallego Gorge, Northern Spain"

The awards and prize monies will be awarded at 3:00pm Saturday 28th September at the Dudley Rock and Fossil Festival (Dudley Museum and Art Gallery)

All entrants will also receive an enlarged, framed copy of their winning image together with a certificate

Other Regional Groups

If you can't wait until the next Group talk, why not attend one of our neighbours? GSL members are normally welcome to attend meetings of other Regional Groups but, we advise that you always check with the relevant representative first. Below is a combined summary of events published to-date:

Date	Event	Host	Location
10-Sep	Peat Stabilisation Speaker: Ian Uglow	WRG	The Hub, Aztec West
16-Sep	FIELD TRIP: Methods of coal mining in the northwest and their decommissioning	NWGS	National Mining Museum Overton, Wakefield
17-Sep	Geotechnical Academy Speaker: Amanda Thompson	TVRG	Fugro Office, Wallingford
21-Sep	FIELD TRIP: Huntley Area Leader: John Moseley, Gloucestershire Geology Trust	WRG	Huntley, Gloucestershire
26-Sep	A Journey to the Burgess Shales Speaker: Dr Jacqui Malpass	NWGS/ NWGA	Beswick Lecture Theatre, Chester University
15-Oct	The Moral Case for Mining <i>is it a question industry can answer</i> Speaker: Mike Harris	WRG	S H Reynolds Lecture Theatre, Bristol University
16-Oct	Reflections on the residual strength of clay soils with special reference to bedding control landslides Speaker: Professor Bromhead	NWGS/ NWGA	Renolds Lecture Theatre, Manchester University
22-Oct	Young Geologists Competition Various Speakers	TVRG	Reading
29-Oct	Carbonatites <i>mantle melting and the Natural History Museum</i> Speaker: Dr Emma Williams-Humphries	WRG	The Hub, Aztec West
12-Nov	Meteorites Talk	WRG	S H Reynolds Lecture Theatre, Bristol University
19-Nov	Electro-kinetic Slope Stability Speaker: John Lamont-Black	TVRG	Town Hall, Reading
21-Nov	Assessment and design mitigation for rockfalls in quarries Speaker: Thomas Clifford	NWGS/ IoQ	Williamson Lecture Theatre, Manchester University
26-Nov	Offshore Foundations and the Humber Estuary Speakers: Imad Alobaida and Andrew Benson	WRG	The Hub, Aztec West
03-Dec	Hydrogeology Speaker: Peter Thorn	WRG	The Hub, Aztec West
05-Dec	Underground Bridgewater Canal System in North West Manchester Speaker: Glen Atkinson	NWGS	Williamson Lecture Theatre, Manchester University
10-Dec	AGM followed by TBC	TVRG	Bird in Hand, Maidenhead
10-Dec	Geoscience literacy and understanding in the public realm Speaker: Hazel Gibson	WRG	S H Reynolds Lecture Theatre, Bristol University
16-Jan	Construction Over Abandoned Mine Workings Speaker: Dave Parry	NWGS	Birchwood Centre, Birchwood Park, Manchester
13-Feb	Incoming - Learning to love the Meteorite Speaker: Ted Nield	NWGS/ LGA	Lecture Theatre 137, Liverpool John Moores University
18-Feb	Downhole Geophysics Speaker: Heather Butler	TVRG	Fugro Office, Wallingford
14-Mar	SVOC and DNAP - Challenges for Contamination in Bedrock Speaker: Hazel Davidson	NWGS	Williamson Building, Manchester University
18-Mar	Geology, Minerals, and Exploration in the Democratic Republic of the Congo Speaker: Kathy Kavanagh	TVRG	Oxford
18-Apr	Geological Factors in Major Landslides and Slope Stability Speaker: Steve Hencher	NWGS	The Swan, Golbourne Road, Winwick, Warrington
13-May	One Day conference with the engineering group	TVRG/ TVEG	TBC

NWGS	North West Geological Society	geologicalsociety.northwest@gmail.com
TVRG	Thames Valley Regional Group	tvgrsecretary@gmail.com
WRG	Western Regional Group	westernregionalgroup@gmail.com

Other Societies

WMRG/GLS members are also normally welcome to attend meetings of other societies, but should always check first with the relevant representative.

Further information can be found on individual Society web sites.

Warwickshire Geological Conservation Group

For information on events visit: www.wgcg.co.uk

Or, contact Ian Fenwick swift@ianfenwick.f2s.com

Group specifics: There is a charge of £ 2.00 for non-members.

Shropshire Geological Society

For information on events visit: www.shropshiregeology.org.uk

Group specifics: Anyone wishing to attend should telephone or email the co-ordinator for the meeting at least 48 hours in advance of the activity. A charge of £ 3.00 is levied for non-members.

Herefordshire and Worcestershire Earth Heritage Trust

For information on events visit: www.earthheritagetrust.org

North Staffordshire Group of the Geologists' Association

For information on events visit: www.escikeele.ac.uk/nsgga

Group specifics: Non-members pay 2 to cover temporary membership giving them insurance cover. A field fee of 2 per head is normally charged for members and non-members to cover leader's expenses.
