



The
Black
Country
Geological
Society

NEWSLETTER No. 165

June 2004

The Society provides limited personal accident cover for members attending meetings or field trips. Details can be obtained from the Secretary. Non-members attending society field trips are advised to take out your own personal accident insurance to the level you feel appropriate. Schools and other bodies should arrange their own insurance as a matter of course.

Leaders provide their services on a purely voluntary basis and may not be professionally qualified in this capacity.

The Society does not provide hard hats for use of members or visitors at field meetings. It is your responsibility to provide your own hard hat and other safety equipment *(such as safety boots and goggles/glasses) and to use it when you feel it is necessary or when a site owner makes it a condition of entry.

Hammering is seldom necessary. It is the responsibility of the hammerer to ensure that other people are at a safe distance before doing so.

FUTURE PROGRAMME

**Lecture meetings are held at Dudley Museum, St James's Road, Dudley. Phone (01384 815575)
7.30 for 8 o' clock start unless stated otherwise.**

Chairman
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Field Secretary
A. Rochelle B.A. Hons.,
Tech.RICS.

SATURDAY 10th JULY 2004 (All Day Field Trip)

'Journey to the heart of a geosyncline' Leader Mike Williams

Transport for this trip will be by coach, and the itinerary, including the pick up points and times are as follows:

- 8:00 am. Coach leaves Dudley Museum.
- 8:10 am. Sedgley Bull Ring. [A/Z p59 H5]
- 8:20 am. Wolverhampton; Faulkland Crescent. (secure parking nearby).
[By the Coach Station, off the Ring Road, just East of the Stafford Street turn.
A/Z p27. H6]
- 8:30 am. Wolverhampton; Sabrina Road, Compton. [On the Bridgnorth Road, just west
of 'The Mermaid'. A/Z p41. F2]
- 8:50 am. Bridgnorth; Severn Valley Railway.
- 9:15 am. Craven Arms Railway Station.
- 10:30 am. (approx) Coffee stop at Cross Keys, near Llandridnod Wells.

11:30 am. ELAN VALLEY Caban Coch Quarry. Silurian conglomerates and grits deposited in a submarine canyon. Examples of normal and reverse grading.

12:15 – 1:00 pm. Mountain Road to Devils Bridge with fluvial and glacial features.

1:00 pm. Lunch stop at Devils Bridge. The Hafod Arms hotel offers a range of sandwiches and jacket potatoes.

2:00 pm. Leave for a visit on foot into the Rheidol Gorge at Parson's Bridge, with examples of river gorge features and the opportunity to collect graptolites.

3:00 pm. Depart for Clarach Bay to examine Bouma sequences of turbidite deposits plus glacial beach features.

5:00 pm. Leave Clarach Bay for Bishop Castle Beer Festival, arriving at approximately 6:30 pm.

8:00 pm Leave Bishop Castle for home.

We have had 25 expressions of interest for this trip, which is limited to 33 places, so it is important that Mike receives your confirmation as soon as possible. The cost is £6 per person. Please see the end of this Newsletter, and complete the form and return to Mike as early as possible.

SATURDAY 17TH JULY 2004 (Afternoon Field Trip)

'Barr Beacon Quarry - A look at the Permo-Triassic interface'. Leader: Alf Cole.

Meet by the white Portland Stone Monument on Barr Beacon **South** car park at **2.00 pm.**
A-Z p55, J2. NGR (Birmingham Sheet) SP 062 974.

We will look at the sedimentary structures in the late Permian/early Triassic sediments, and discuss the provenance and depositional conditions, and identify "the great extinction horizon". There will also be an optional conclusion to the day. If the weather is good, members may wish to drive the one mile to visit Walsall's oldest pub (The Manor Arms), which peculiarly has no bar, and look at the Silurian/Carboniferous exposure, close by in Linley Woods.

THURSDAY 2ND – SATURDAY 4TH SEPT 2004 (Conference)

UKRIGS Annual Conference at Dudley.

This year the UKRIGS conference will be held in Dudley. For further details, see the conservation column, below.

SUNDAY 12TH SEPTEMBER 2004 (All Day Field Trip)

'The Ludlow Anticline, Wigmore and the Teme Bank Trail'. Leader: Dr. Paul Oliver.

This is a joint meeting with Woolhope Naturalists Field Club. Paul Oliver is the President of the WNFC, and the Chairman of their Geology Section.

Meet at High Vinnalls car park and picnic site, Mortimer Forest at **10.30 am.**
NGR: SO 474 732

Most of the morning will be spent looking at exposures close to the car park in the Much Wenlock Limestone Formation; Wenlock Series and Lower Elton Formation, and their associated fauna. We will then go to the excellent viewpoint of the Ludlow Anticline just below Wigmore Castle, and have a bar-snack in Wigmore village.

In the afternoon Kate Andrew will lead the party along the Teme Bank Trail; a series of exposures in the rich Silurian sediments. Kate is Principal Heritage Officer for the Herefordshire Heritage Services, and the author of the trail guide.

MONDAY 27TH SEPTEMBER 2004 (Indoor Meeting)

'Red Beds. Decoding Geomagnetic and Astrophysical Data' by Peter Turner, Birmingham University.

MONDAY 25TH OCTOBER 2004 (*Indoor Meeting*)

'The geology, mineralogy and palaeontology of the Coseley Coal Measures Ironstones'
by Laura Braznell, University of Birmingham.

Exceptional Preservation in the Upper Carboniferous Coseley Lagerstätte

Laura is a PhD student currently researching the conditions that gave rise to the spectacularly preserved soft-bodied fossils in the ironstone nodules of Coseley and similar material from other famous locations like Mazon Creek, USA. Specimens from the collections at Dudley will be on display for the evening.

The Late Carboniferous Coseley Lagerstätte from the West Midlands, UK, contains exceptionally preserved plant and animal fossils that occur as hard parts and mineralised soft tissues sealed within siderite nodules, which vary in size from 15 - 250 mm. The nodules are recovered from Westphalian B siltstones and mudstones of the Coal Measure Group and were abundant enough in these horizons to form commercial ironstone beds.

The Coseley fossils have been examined using various techniques including scanning electron microscopy and point analysis, which have revealed several distinctive phases of preservation: soft tissues have been replaced by kaolinite, voids have been extensively filled with sulphide minerals, all of which are encased in siderite concretions. Bacterial mediation has allowed the authigenic growth of very fine-grained clay minerals on the surface of the decaying organisms, templating the soft tissues and forming biofilms that preserve fine anatomical detail. This was accompanied by early framboidal pyrite formation and closely followed by void filling sphalerite, galena and pyrite precipitation. Siderite formation would have either occurred during or shortly after soft tissue preservation producing a concentric nodule that prevented compaction of the fossils.

MONDAY 6TH DECEMBER 2004 (*Indoor Meeting*)

Please note change of date. Members evening of short talks and demonstrations

This evening has proved to be very popular in previous years and will again be open to anyone who would like to share something of interest, whether it be some rock or fossil specimens collected on holiday or a short talk accompanied by a few slides. We will provide refreshments as in previous years to make the evening a very sociable one. Please start to think of what you might be able to contribute, and we will be asking for a title from members in the August Newsletter.

MONDAY 31ST JANUARY 2005 (*Indoor Meeting*)

'Gold Exploration' by Tim Colman of the BGS.

MONDAY 28TH FEBRUARY 2005 (*Indoor Meeting*)

'Global Mass Extinctions: Volcanism versus Impacts' by Prof. A.D. Saunders of the Geology Department, University of Leicester.

Professor Saunders was born in the West Midlands and educated at the High Arcal Grammar School in Sedgley, and so he is very familiar with the Wren's Nest and the Baggeridge spoil heaps! He read geology at Sheffield and took his PhD in Birmingham. His research has been mostly into igneous petrology and geochemistry, and he is now working on mantle plumes and their relationships to volcanism and mass extinctions.

MONDAY 28TH MARCH 2005 (*Indoor Meeting*)

'Life in the Triassic in Britain' by Dr. G. Warrington of the BGS.

MONDAY 25TH APRIL 2005 (*Indoor Meeting – to be confirmed*)

'Exploring the Bolivian Precambrian Shield and the lost world' by Dr. Martin Litherland from the BGS, Kingsley Dunham Centre.

SOCIETY MEMBERS OBITUARIES

Paul Shilston

If memory serves me correctly, my earliest recollection of Paul Shilston is of a quiet but genial chap sitting in the bar, with Judith his wife, at the Woodland Hotel, Llangollen in May 1978. The occasion was the Society's very first weekend field meeting led by Peter Oliver and Geoff Davies. Whether or not that was their first meeting I don't know, but from the outset Paul and Judith became very active members and always took a great interest in Society activities.

Paul was a Cambridge graduate and by profession an accomplished electrical engineer. In the early 1980's our respective commercial paths overlapped for a while thanks to a kind introduction he made on my behalf. Paul became BCGS Hon. Secretary in 1980, a role which he filled admirably. His quiet and unassuming manner belied a real worker, and I quickly realised that he could be relied upon to look after most of the general administration allowing me to concentrate on conservation.

Paul, like the late Sheila Pitts, was a great traveller, and the Society was frequently entertained with wonderful slide presentations of exciting or exotic locations with geological interest, like Yellowstone Park and Iceland where he and Judith had been. Significantly Judith became Hon. Treasurer in 1988 and together they were a real dynamic duo. Indeed the success of the early Dudley Rock & Fossil Fairs was very much down to their practical organisation and planning skills, not to mention the ability to mobilise a dozen or so members over a weekend to act as ticket sellers, stewards or general helpers.

Some time after his retirement from work Paul decided that it was time for change and he retired as Hon. Secretary in 1997, although to help smooth the way for the new incumbent he took on the role of Meetings secretary for twelve months, finally retiring from the committee in 1998. The Society was well represented at the funeral, which was held at St. Nicolas Church, Kings Norton on 20th April.

Alan Cutler

Douglas Warren

We were very saddened to learn only recently, that Douglas Warren died earlier this year. Douglas joined the Society in 1976 sometime after retiring as Borough Engineer for Dudley. In that capacity he would often tell amusing tales of paddling around with the late Basil Poole, in a boat through the Dudley Caverns in conditions that would give any present day Health and Safety officer apoplexy. Douglas and his wife Ivy were always keen supporters of Society activities and meetings, except for certain periods in the spring and summer when they disappeared on caravanning excursions.

Douglas was also an active member of the Sherlock Holmes Society and I remember him asking if I could think of any geological connections, however tenuous for a paper he was giving. All I could think of was the Dudley trilobite, *Homolanatus delphinocephalus*, perhaps better known today as *Trimerus*, obviously named by Holmes ! I shall best remember him though, with Ivy, dressed in Victorian clothes, posing for the local newspaper cameramen on the occasion of the 150th Anniversary of the former Dudley Geological Society meeting in the Edwin Richards quarry at Rowley in 1992.

Alan Cutler

EDITORIAL

Have you seen the film, "*The Day After Tomorrow*" that was released recently? It is probably best known for spectacular scenes of floodwater engulfing New York as polar ice caps melt overnight. This then shuts down the Gulf Stream and we are plunged into another Ice Age. Is this possible? Obviously such a sudden change in sea level is not thought to be credible and reviews have called it 'bad science'. However, the underlying science of global warming is very real.

In the twentieth century mean temperatures have gone up by about 0.6°C and sea levels have risen by up to 20cms, simply through the expansion of the warmer oceans. The Gulf Stream in the North Atlantic is likely to become weaker as temperatures rise, so climatologists tell us. Global warming is a real issue familiar to us all.

Also in May, the European Commission set up a £6m project under Professor Paul Samuels to study flood risks in Europe. Professor Samuels is a British expert on river and coastal defences. If present sea level rises continue, London would be severely threatened, along with other low lying areas, particularly in Eastern England.

River flood plains would also be under threat from more frequent flooding. The policy to deal with flooding used to be centred on the concept of 'hard engineering'; building physical barriers to keep the water out, and recent defences in Shrewsbury and Bewdley have illustrated this method. But more and more it is accepted that rivers will naturally flood, which is what a flood plain is for. Although sensitive high-density urban areas might be protected, this will only pass the problem on to another point downstream. Areas without habitation should be allowed to flood naturally, yet it is reported that in some areas local authorities are still allowing new housing to be built on active floodplains.

The coastal problems have also seen a shift in emphasis, away from expensive sea walls to concept of 'controlled retreat', with large areas returning to their original use as wetlands. *The Day After Tomorrow* might make people think more seriously about global warming, especially in the United States, but unfortunately, it is so spectacularly exaggerated, it will probably cause people to reject the whole theory as science fiction!

Bill Groves

REPORTS

The glacial and post-glacial features of Eastern Shropshire

Field Trip led by Andrew Rochelle; 15th May 2004

Another wonderful day for weather, bluebells, butterflies and countryside.

A group of twelve members met in Newport at 10 30 am and toured the area by car and on foot, studying relict lake systems, ice sheet debris, mounds and erratic boulders, and their origins.

A kettle hole, Loynton Moss, was visited, and later after lunch, at Norbury Junction, the Gnosall overflow channel was studied. This being a small channel that once emptied impounded meltwater from the Aqualate area into the Trent catchment.

A kame and esker type formation was then visited and the late spring bluebells appreciated.

The last site was a visit to the Mere itself. Relict lakeshores and the past and future of the lake were discussed,

An unexcavated Bronze Age boat in the lake was indicated to members, who were invited if they wished, to visit a display of an excavated Bronze Age boat from the locality, at Harper Adams University College,
A good day.

Andrew Rochelle.

[CONSERVATION COLUMN](#)

Wrens Nest Update -Seven Sisters Siteworks

Infilling works have recommenced at the Seven Sisters. The lower levels that are in a very sorry state indeed, have now almost been completely grouted. The upper daylight levels are due to be infilled with loose basalt gravel before September, and if funding is released as is hoped, rockbolting and removal of the gravel will also begin by September.

Notice of the 7th UKRIGS Annual Conference

THURSDAY 2nd – SATURDAY 4th SEPT will see Dudley play host to geoconservation professionals and amateurs alike from all over the UK. Its primary theme has been honed down to 'Broadening horizons for Geoconservation'

We will be presenting the Wrens Nest Seven Sisters as a case study, and talking about the bigger picture for geotourism in the Dudley area. This will, as previously stated include special presentations on 'The application of engineering expertise to conserving and managing geological sites', and 'The use of audio visual, film and the media to bring the geological story of local sites to the widest possible audience'. The programme will include updates on Geoparks and case studies from other parts of the UK.

Thursday and Friday will be the main part of the conference and will include field visits to the engineering works at The Seven Sisters at Wrens Nest, and hopefully the underground tunnel system beneath Drakelow, near Kinver. Saturday will be the UKRIGS AGM and we will finish with a final field trip, which will include some of the public art that has a geological theme. Displays will be mounted at the Museum and the BCGS, as the host RIGS Group will be acting as 'ushers' and 'gofers' for the event.

For those of you who have never been to one of these conferences and experienced what is going on across the UK to make geological sites more accessible to visit and enjoy, this is the best chance to test the water.

Graham Worton

[DUDLEY MUSEUM UPDATE](#)

Exhibitions

Dudley Unearthed -The New Permanent Geology gallery.

I am delighted to be able to announce that the new geological gallery will be opening on the 14th August 2004. Many thanks to everyone who has supplied their opinions and views on our designs and ideas. These have helped in making sure that we have a better end result.

The final phase of the 'UnEarthed' gallery will be put in place in September when we launch the teachers pack and schools outreach programmes to coincide with the start of the new term. This will also be previewed at the RIGS Conference in September.

Rock and Fossil identification mornings

In association with the Launch of the 'UnEarthed' gallery I will also be formalising a programme of 'identification mornings' at the museum, which will be widely publicised. For your information the dates are:

Friday 30th July 2004	11.00am to 1.00pm
Friday 20th August 2004	11.00am to 1.00pm
Saturday 18th September 2004	10.00 am to 12.00 noon

So, if you have any specimens that you would like identified then please make a note of the dates and times and come along and join us

New leaflet for Barrow Hill

I am similarly delighted to announce that we will shortly be releasing an interpretive leaflet for the geology, wildlife and human history of the Barrow Hill dolerite quarrying area of Pensnett. I will include more details or a copy in the next newsletter.

Graham Worton

GEOBABLE

The definition of the word 'FACIES' did not generate much response from members, but perhaps it was because it cannot really be defined by a single sentence. I was amazed that when I typed FACIES into 'Google' it generated 265,000 hits, 9,160 of them from UK sites. Surprisingly, most of them were not related to geology, although biologists may not be surprised. Indeed Webster's 1913 Dictionary has no geological reference at all: 'the general aspect or habit of a species with reference to its adaptation to its environment' was the biological meaning, or: 'the face of a bird, front of head'.

The word is derived from the Latin for 'face', and other biological and medical definitions contain phrases such as, 'general aspect, outward appearance, and the expression of the face'. The derivation also indicates the pronunciation of the word, I was always taught that it had a short 'a' and a hard 'c', but it would seem that the long 'a' and soft 'c' is more correct, giving a pronunciation; 'fey shees'.

The best succinct definition I found came from an on-line dictionary: 'In Geology, a rock or stratified body distinguished from others by its appearance or composition'. The New Penguin Dictionary of Geology has; 'All lithological and palaeontological features of a particular sedimentary rock from which depositional environment may be inferred'. The Encyclopedia of Solid Earth Sciences, expands the sedimentary theme to include 'biofacies' and 'lithofacies', and includes 'seismic facies', distinctive characteristics of seismic reflections.

I could not find a reference to 'metamorphic facies' in these two dictionaries, although it is prominent in the Longman Illustrated Dictionary of Geology; 'a group of rocks of varying composition, all of which have been metamorphosed under similar conditions'. But whatever the books say, we will no doubt continue to use the word usefully and adapt it to new geological situations, and all geologists will know exactly what you mean.

The small prize offered in the last newsletter for a definition remains unclaimed, so the editorial team will share the packet of Polos.

Longman Illustrated Dictionary of Geology. 1982.

The Encyclopedia of Solid Earth Sciences. Philip Kearey. Blackwell. 1983.

The New Penguin Dictionary of Geology. Philip Kearey. 2nd edition. 2001.

Bill Groves

[OTHER NEWS](#)

The *ABBERLEY AND MALVERN HILLS EUROPEAN GEOPARK* is now up and running. It is one of 17 of these parks, that aim to link geoconservation with sustainable rural economic development through the promotion of tourism. There was a nearly a fortnight of events to celebrate the Geopark that ended on June 6th. Unfortunately we did not receive the details of the activities in time to put in the last Newsletter.

However, there will be more things happening and information about the park can be had from the Geopark Manager, Dr Cheryl Jones, University College Worcester, Henwick Grove, Worcester, WR2 6AJ. Tel: 01905 855425. Their website is on www.worc.ac.uk/geopark

[CONTACT US](#)

As ever we would love to hear your news and views so please put pen to paper or fingers to keyboard and give us your thoughts. Notices that appear in this Newsletter will remain in future editions until the date of the related meeting or event has passed. In order to include material in the June Newsletter, please send/give it to one of the Editorial Team by **Monday 2nd August**.

<u>EDITORIAL TEAM</u>		
<p><i>Hon. Secretary:</i> Sarah Worton 158 Oakham Road Oldbury B69 1QQ Tel 01384 235946</p>	<p>Dudley Museum and Art Gallery 1 St James' Road Dudley DY1 1HU Tel 01384 815574 Or email: graham.worton@dudley.gov.uk</p>	<p>Bill Groves 23 Churchward Grove Wombourne Wolverhampton WV5 9HB Or email: bill@groves54.fsnet.co.uk</p>

BCGS Website now at www.bcgs.info

BOOKING FORM FOR THE 10TH JULY FIELDTRIP
IS ON THE NEXT PAGE

**To book places on the field trip, '*Journey to the heart of a Geosyncline*',
Saturday 10th July 2004.**

Name(s)..... Contact telephone.....

Number of people at £6 per person.....

Pick up point you will be joining the coach.....

Please send this, together with the trip fee (cheques to 'Black Country Geology Society) to:

**Mike Williams,
1D THE BUNGALOW,
PARKDALE WEST,
WOLVERHAMPTON,
WV1 4TE**