



The
Black
Country
Geological
Society

NEWSLETTER No. 166

August 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

*G.J. Worton B.Sc., C.Geol.,
F.G.S.*

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*G.W.J. Hensman B.Sc.,
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Field Secretary

*A. Rochelle B.A. Hons.,
Tech.RICS.*

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*)

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.

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.**

EDITORIAL

Often in geology we sail close to the wind, go off the rails, and we have to think, hold your horses, keep your powder dry and wait for a fair wind so you can get a good head of steam and move forward. As you will realise by now, that first sentence is nonsense - cliché-ridden rubbish - but its purpose is to illustrate how we use phrases and metaphor derived from practices and activities everyone was familiar with. Sailing ships have supplied many of these, in addition to the two I have used you could add 'the cut of one's jib' or something being 'under full sail'. There are many expressions derived from the age of steam and travel by rail, and 'keeping your powder dry' is one of many phrases that come from the armed services.

But what of geology? Earth science, geology and palaeontology were so popular in the 19th century that there should be some common forms of language derived from that source, and yet I find it difficult to think of many. When I lived in London, I did hear people referred to as being a 'diamond geezer' or something being 'as hard as flint', but these are not strictly geological. We all understand when someone is called 'an old fossil' or a 'dinosaur' and I am sure that there are other examples of geology supplying words that become part of our language.

I am no expert on the use of English, and neither is John Prescott, the deputy prime minister, but he, as well as other politicians have started to use terms related to plate tectonics. Recently my Sunday newspaper wrote:- 'The deputy prime minister admitted that a seismic shift was occurring and that the tectonic "plates" were moving'. John Prescott was then quoted as saying; "I think it's true that, when plates appear to be moving, everyone positions themselves for it, every British prime minister goes eventually". So perhaps plate tectonics has the credentials to supply a metaphor, every child is taught it at school and it is generally understood.

It is ironic that an older expression that conveys the same meaning is that there has been a 'sea change', yet another nautical reference.

Bill Groves

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.

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 very soon. 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 first dates:

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

Geology has always had the reputation of never using one term when two will do. Many words are interchanged with each other, and can if you are not careful, lead to confusion. However, rationalisation does take place and things are changed, I can remember when feldspar was spelt 'felspar', and I once witnessed an argument between academics as to whether it was Precambrian or Pre-Cambrian. The former won and has now replaced the latter.

One term that does seem to be on the way out is 'specific gravity'. Used in mineralogy as a figure that compares density with the density of water, which is 1. Or to put it another way, it is the ratio

between the weight of a substance and that of a same volume of a standard substance, in this case water. But if you mentioned specific gravity to an A-level student of geology, the chances are that he or she will not have heard of it, as the accepted term now used is 'relative density'. It seems more logical, comparing the density with that of water, and in this case density is the key scientific term as opposed to gravity.

There is a danger here of moving into the anorak territory of boring mineral facts. It is generally remembered that quartz clocks in at 2.65, the metallic minerals are 'heavy' at over 5.00, and galena, the ore of lead is very heavy at up to 7.60. But, - did you know – the metal Osmium from the platinum group would have a specific gravity/relative density of 22.69 if it was found as a native metal, which it is not. Natural, impure platinum can be 19.00, gold is 19.31. Of the light minerals, I am told that oxammite and sassolite are the lightest at 1.48, but you may know better. Sassolite is natural boric acid and oxammite has a chemical formula of, $(\text{NH}_4)_2(\text{C}_2\text{O}_4) \cdot (\text{H}_2\text{O})$!! That is definitely a boring mineral fact.

Bill Groves

OTHER NEWS

We have received an interesting letter from *Margaret and Norman Ridley* who have recently returned from a marvellous holiday to Hawaii, organised by a Bromsgrove based company, 'Volcanic Experiences'. As they say in their letter, "*We wondered whether the readers of the Newsletter might be interested to know that this organisation exists*". Margaret and Norman were able to look at volcanic features on the Big Island as well as viewing the sunset from the summit of Mauna Kea, a 14,000ft extinct volcano.

Volcanic Experiences organises four other similar holidays, to Sicily, Vesuvius, Santorini and Iceland. They are based in Manor Court Road, Bromsgrove, (tel: 01527 832578) and their website is on: www.volcanic-experiences.co.uk

There are other similar organisations that focus holidays on geological themes, and if there are Newsletter readers who would like to tell us about them we will gladly describe them.

Bill Groves

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 October Newsletter, please send/give it to one of the Editorial Team by **Friday 1st October**. Our apologies for the late arrival of this newsletter; pressure of work, holidays.....sorry!

<i>EDITORIAL TEAM</i>		
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BCGS Website now at www.bcgs.info