



The
Black
Country
Geological
Society

NEWSLETTER No. 167

October 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.**

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

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microscopy and point analysis, which have revealed several distinctive phases of preservation: soft tissues have been replaced by kaolinite, voids have been extensively filled with sulphide minerals, all of which are encased in siderite concretions.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*) STARTING AT 7:00 PM.

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 with us something of interest. We are asking for volunteers to speak or demonstrate or show us some photos, slides or specimens. We will provide refreshments as in previous years to make the evening a very sociable one. **Please contact Gordon Hensman on 01384 256423 to indicate your willingness to take part in this evening.** Gordon will need to know the equipment that you will need: e.g. overhead projector, slide projector etc, and the title of your talk. Each presentation normally lasts 10 to 15 minutes. So that we can make the most of what is always a very pleasant evening, **we will be starting at 7:00 pm.**

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*) 'The fascinating minerals of Northwest Scotland, by Spencer Mather. Note that this is a change from the details given in the last newsletter.

EDITORIAL

A visit to the Geological Museum in South Kensington is always worthwhile, with a clever mix of spectacular displays to excite the young, and excellent resources for the interested amateur. It also allows you to look at, and buy the latest books, guides and geological maps. There is also a simple display of important fossils, arranged stratigraphically, and the last time I was there it was in an out of the way position, and so could easily be missed. There were about 40 fossils in the Silurian cabinet, and just under half had the label, "Dudley, Worcestershire". The county may be a little out of date, but it made me realise how important the geology of our local area is, and yet, as is often the case with familiar features, we tend to take them for granted.

But it is not just in this country where these fossils are on display. Graham Worton tells me that on a recent visit to the Museum of Geology in Barcelona, incidentally the oldest museum in that Spanish city, he found two excellent displays of Dudley fossils. He knows that they are also on show at museums in Capetown, Adelaide and Denver, Colorado. Perhaps you know of other places where fossils from the Dudley area are displayed; if so please contact us so that we can put together a list of locations. Please tell us if you have seen Dudley fossils outside of the Black

Country, as it would be interesting to know how far they have travelled. A message to any of the editorial team would be most welcome, or you could just tell us at one of our meetings.

Bill Groves

REPORTS

Joint Field Excursion with the Woolhope Naturalists' Field Club. 12th September 2004

Members assembled at High Vinnalls car park in Mortimer Forest at 10:30 am.

Dr Paul Oliver, President of the W.N.F.C., presented the first part of the day. The context of the geology and local landscape features were described. We were conducted to various Silurian exposures adjacent to the High Vinnalls car park and particularly the Much Wenlock Series and Lower Elton formations. The Middle Elton formation of dark olive mudstones and fine siltstones produced a number of good examples of the trilobite *Dalmanites*. Graptolites such as *Neodiversograptus nilssoni* and *Monograptus colonus* were also present. Brachiopods *laegjiria* and *Slava* were also described.

At a further location, a layer of Fullers Earth, which resulted from fallout from distant volcanic explosions, was seen.

The party then travelled to Wigmore, where from the excellent viewpoint at the castle, we observed and had described the landscape associated with the area once occupied by the post glacial Lake Wigmore, until it was drained by the overflow channel at Downton Gorge. Lunch was taken at Wigmore before the party travelled to Ludlow.

At Ludlow Kate Andrew conducted the party along the Teme Bank Geological Trail, a journey through Ludlow's Silurian history was made. The day was completed with a cup of tea at the Cliffe Hotel.

Many thanks to the Woolhope Society for their hospitality. We hope to see them in the summer of 2005 for a further joint visit, when Graham Worton will entertain us all with his expert knowledge of the Wren's Nest and Dudley area.

Andrew Rochelle

CONSERVATION COLUMN

7th UKRIGS Annual Conference

This important conference was held in Dudley at the start of September. As can be seen from the photograph, the large gallery at the museum was a splendid venue for the discussion and presentation sessions, and the weather remained fine for the three field trips.

The primary purpose of UKRIGS is to '*...encourage the appreciation, conservation and promotion of Regionally Important Geological and Geomorphological Sites for education and public benefit...*' The organisation was established in 1990 by the Nature Conservancy Council and continues to be actively supported and sponsored by English Nature, together with the equivalent Scottish and Welsh bodies and other interested groups.

There are currently over 50 local RIGS groups in the UK and our local group is based on the BCGS. Each group endeavours to identify sites, conserve and improve them and promote public awareness. Our local sites were visited by the conference, from Coombe Wood in the east to Kinver in the west, and taking in Saltwells, the Wren's Nest and Castle Hill. One of the highlights was a buffet supper in one of the limestone caverns.

Our society is one of the member organisations of UKRIGS, and active members are always very welcome. Watch this space!!

[DUDLEY MUSEUM UPDATE](#)

Exhibitions

[Dudley Unearthed -The New Permanent Geology gallery.](#)

By the time that you read this, the new gallery in the museum will be open. It has been a long journey since that part of the building was closed following the discovery of rotten timberwork, and in addition to the museum staff, several students from local schools and colleges have helped in the gallery, with model making and labelling as part of their work experience.

The gallery is divided into two areas, the first of which focuses on the geological history and heritage of Dudley. You are taken on a timeline tour, with bold graphics (see below), abundant specimens, relicts and a three-dimensional model of the local area. There is a concentration on the Silurian fossils and limestone workings of the Wren's Nest, together with the extraction of coal. The tour finishes with the groundbreaking contribution that Dud Dudley made to coke fired iron making. This whole gallery is set in a limestone cave, which is faulted up against coal, and ingenious and very effective backdrop.

To reach the second part of the exhibition you go through an old mine entrance to see a series of themed display cabinets and drawers. There is too much here to describe in one brief article, but not to be missed is a superb mineral display, and a very comprehensive exhibit focussing on trilobites.

The aim of such an exhibition must be to capture the interest of children, students and the interested adult with little geological knowledge, and yet having enough to satisfy the interested amateur as well as the professional geologist. This seems to be achieved, although feedback from visitors will be the true test of this. I am sure that all members of BCGS will endeavour to visit the museum, and hopefully tell us what you think.

Bill Groves

GEOBABLE

'*Sial*' and '*Sima*' are two words that are going out of use in geology. Sial refers to the upper parts of the crust that consist mostly of silica and aluminium, while sima is the lower part where magnesium is present alongside silica. These terms became less important when plate tectonics emerged as the underlying explanation of major Earth structures. The term 'crust' was now not so significant as 'plate' and 'lithosphere', and so sial and sima became largely redundant.

They are of course not words at all, they are *acronyms*. Sial is made up of Si and Al (silicon and aluminium), while sima comes from Si and Ma (magnesia). There are other well-known geological acronyms, we use Ma to denote time in millions of years, and BIF stands for Banded Ironstone Formation. There are some that roll easily off the tongue, for example ESTA (Earth Science Teachers' Association). Others do not spell a word so we just use the letters, BCGS and the GA, or shorthand such as GeolSoc.

It was during the recent UKRIGS conference that I was reminded of the number of acronyms we now use. We all use them at some time or other, they can be very useful, some are very funny and others plain daft. However, UKRIGS, or more specifically RIGS, is an acronym that, like sial and sima, is slowly becoming a word in its own right. We talk of 'a RIGS site', yet the word 'site' is incorporated in the term 'Regionally Important Geological Sites'. The classic example of an

acronym becoming a word is PIN (personal identification number). It is quite common to see phrases such as; "you can identify yourself with your personal PIN number".

I searched in vain for examples of funny or daft acronyms connected with geology, but found that they did not seem to be used as much as I expected, and those that were used were sensible and practical, you of course may know differently. However, I did come up with a few outside of our subject. ALGE stands for the Association of Local Government Ecologists, and appropriately PEST is the Professional Executive Support Team. You can also use an acronym to make a point. I once worked for a manager who was obsessed by the need for committees and meetings. He asked his deputy to set up a new group to advise on the use of computer peripherals in the organisation. Reluctantly he did so, but the Computer Resources Advisory Panel was disbanded after one meeting. Point made!!

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 or give it to one of the Editorial Team by **Monday 6th December**.

<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