NEWSLETTER No. 180
DECEMBER 2006

The Black Country Geological Society

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.

COPY DATE FOR NEXT NEWSLETTER IS 5TH FEBRUARY 2007

In this edition:

A very happy Christmas and a successful 2007 to all our readers

from the editorial team

OUR LOGO

At the head of this Newsletter you may notice that the Society's logo has changed slightly. It has in fact gone back to the original, with the name of the society proportionally larger than the 'Dudley Bug'. Several translations from one document to another had led to the trilobite becoming larger than it should have been.

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.

MONDAY 29TH JANUARY 2007 *(Indoor Meeting)*

Neil Rushton,: (Team Leader Engineering Advice Telford and Wrekin)

Landslips in Telford.

Telford and Wrekin Council have been engaged in the assessment of Land Instability in the Ironbridge Gorge World Heritage Site since 2001, and this paper will look to review the findings of investigations to date, and to outline the projects undertaken and underway, to manage instability in this unique environment.

Neal Rushton has some 28 years experience in mining, geotechnics and construction, and now manages a team of 10 Engineers at Telford & Wrekin Council. He has been a Chartered Surveyor since 1989 with membership in four faculties - Minerals and Waste, Geomatics, Construction and Planning, and Development. Neal previously worked for the Coal Authority for 15 years, in private practice for 14 years, and now for Telford & Wrekin Council since 2001. He is currently responsible for the management of a series of projects to assess, investigate and stabilise several sites in the Iron Bridge Gorge World Heritage site. His team also offer advice to the Development Control and Building Control sections of the council on geotechnical and environmental issues.

SATURDAY 17TH FEBRUARY 2007 *(Field Meeting)*

Leader: Jon Radley

Trip to Warwickshire Museum, Warwick city centre and the Burton Dasset hills.

Meet at Warwick Museum in the centre of the town, ready for a tour of the museum, and then the town centre to look at building stones. Members will need a car to get to the locality at Burton Dasset Country Park. For further information, if needed, contact Andy Harrison on jenufa8@yahoo.com or on Andy's mobile 'phone 07973330706.

MONDAY 26Th FEBRUARY 2007 *(Indoor Meeting)*

Dr. Cynthia Burek: (University of Chester)

The role of Women in the History of Geology

This is a joint meeting with the West Midlands Regional Group of the Geological Society.

SATURDAY 24TH MARCH 2007 *(Field Meeting)*

Leader: Dr Jaqui Malpass

A visit to the Brymbo Fossil Forest

Jaqui was a recent visitor to one of our Monday meetings when she talked about this exciting locality. Details of the meeting place etc will be in our February Newlsetter.

MONDAY 26TH MARCH 2007 *(Indoor Meeting)*

ANNUAL GENERAL MEETING followed by:
David Pannet. (Field Secretary Shropshire Geology Society).

The Ice Age History of the River Severn around Shrewsbury/Ironbridge.

David Pannet has produced leaflets and maps of the Shrewsbury area, and conducted careful investigations into its complex geology. The pioneering description of the glacial history produced by Professor Lapworth - the glacially dammed Lake Lapworth, overflowing and cutting the Severn Gorge and depositing lake silts to mantle the drift and moraines - has been shown to be a little too simple. A number of silted channels have been detected since Lapworth's times, all of which appear to be cut by sub-glacial streams, draining the ice sheet to the north-north-west. One of these channels forms the present Ironbridge Gorge, and some are buried beneath Telford. The concept of one lake covering the whole area is also much more complicated, with a number of lakes existing at various times. David will bring us up to date with the latest ideas about this fascinating area.

SPRING CONVERSAZIONE.

Global Warming – Should We Worry?

Everyone is invited to take part in this forum which is the second such event. Last year it proved to be very well worthwhile. If you have something to say – even if it is a bee in the proverbial bonnet – come and say it.

ADVANCED NOTICE OF FIELD TRIPS FOR 2007 SEASON

Andy Harrison, our Field meetings secretary is hard at work putting together a schedule of trips for next year, commencing in February with a trip to Warwickshire Museum, using public transport. Here is a taster of things to come; we'll give you more details as they arrive, so watch this space!

Already arranged: Warwickshire Museum; Brymbo Fossil Forest.

In the pipeline: Forest of Dean; Abberley Hills; Wenlock Edge Quarries; Jurassic of Warwickshire.
Next year's subsidised coach trip will be in June, to the Natural History Museum in London.

Andy Harrison

In addition, there is also a proposal for an extended trip to the *Chaine de Puys* in **France** in conjunction with our sister societies, in particular the North Staffs Geologists' Association. Are you interested in participating in a residential weekend?

We have the offer from Mike Fereday, Chairman of the North Staffs Group of the Geologists' Association, of a combined trip to the *Chaine de Puys, Massif Central, France*, to visit **Volcania** and the surrounding volcanic features. Mike is very familiar with the region having lived in Clermont Ferrand for some time and has offered to help to make the necessary arrangements. We need to know if you are interested, and also whether a long weekend or a week is the appropriate length of stay.

If you are interested please get in touch with the editor, or directly with Gordon Hensman Tel.01384 256423 gwjhensman@aol.com

Any suggestions of other venues will be gratefully received. The Shropshire Geological Society has regular visits to museums in the Midlands area. Have you got a little gem tucked away somewhere? It's the sort of visit that lends itself to the dark days of winter.

If you are interested please get in touch with Andy Harrison our Field Trips Secretary or anyone on the committee. The response to these questions is very much easier and swifter if you use electronic means. Do not hesitate to give us your thoughts.

Gordon Hensman

OTHER SOCIETIES

NORTH STAFFS GROUP of the GEOLOGISTS' ASSOCIATION

Meetings in the School of Earth Sciences and Geography, Keele University. 7.30pm

Thursday 11 January: The beauty and threat of Indonesia's volcanoes

Speaker Dr Ralf Gertisser (Keele University)

7.30pm start, School of Earth Sciences and Geography, Keele University

Indonesia has the greatest number of active volcanoes in the world. These volcanoes are beneficial to the people living on or near them by providing fertile soil, valuable resources and scenic beauty, but they also pose an enormous threat to the surrounding human populations. Indonesia has suffered the worldwide highest numbers of eruptions producing fatalities and damage to arable land. This talk explores some of Indonesia's most active volcanoes and devastating volcanic eruptions such as the gigantic Toba eruption ~75000 years ago, the great historic eruptions of Tambora and Krakatau, and the recent eruption of Merapi which attracted worldwide media interest.

(Information from NSGGA Secretary; Eileen Fraser – 01260 271505)

SHROPSHIRE GEOLOGICAL SOCIETY

There are a large number of anniversaries and celebrations at the moment, and 2007 marks 200 years of the foundation of the Geological Society of London, the world's leading geological society. As part of this the Shropshire Geological Society is organising the 'Marches Festival of Geology 2007'.

The regional geology of the Marches is classic. Indeed, the area has been portrayed as "The Geological Capital of the Country" and many have felt this should be reflected in the Bicentennial Celebrations of the Geological Society of London. A number of organisations in the Marches have therefore agreed to collaborate to run a festival to celebrate their 200th anniversary which will also be the 150th anniversary of the Geologists' Association and, incidentally, the 175th anniversary of Murchison's epic visit to the area that led to publication of *The Silurian System*.

The festival will be centred on a one-day symposium in Ludlow, on Thursday 13th September 2007, on the theme of "The ground beneath our feet: 200 years of geology in the Marches", supported by fieldtrips, exhibitions and workshops. It will be aimed at a range of people including local children and adults, amateur geologists, and geologists with research interests in the Marches. Related activities are timed within a month or so either side; these will all be listed in a brochure to be published in the autumn and details are already appearing on the Festival web site:
http://www.shropshiregeology.org.uk/festival

EDITORIAL

2007 is the 200th anniversary of The Geological Society of London and the President of the society is the palaeontologist and 'trilobite man' Richard Fortey; he attended our own celebrations for the Wren's Nest earlier this year. In the magazine of The Geological Society of London, '*Geoscientist*' he recently wrote a leader entitled 'Geology and the art of being popular', and this is reprinted here as our editorial.

Richard Fortey ponders the landscape of popular science

Most geologists do not need reminding that the qualities of landscape, its diversity of human use, the 'feel' of old towns, are intimately related to the underpinning of the rocks. But the public are, in general, rather unaware of this fundamental aspect of the countryside: "out of sight, out of mind".

For this reason, when I wrote a book about Britain's geological richness I called it *The Hidden Landscape.* Oddly enough, some of the best feedback I had on the book came from artists rather than naturalists. Poets have a direct feel for landscape; their use of hidden meaning wrapped up in metaphor is appropriate to the truth of landscape, which lies hidden beneath soil and trees. Sculptors naturally have a feeling for materials, and must confront notions of time in their work: they know from the wrong end of a chisel the different properties and workability of stone. They appreciate that some of the easiest materials to work are also the first to decay; like those sad cathedral gargoyles disfigured by time. Novelists like John Fowles are intensely aware of the geological foundation, and the geology smoulders away under the surface of Hardy's *The Return of the Native* – drear Egdon Heath – just as it does in *Wuthering Heights.* So I don't see a difficulty in getting through to artists. The problem is reaching the mass of people with a natural history bent, who 'do' birds or wildflowers, but not rocks.

*Natural England** has just launched a well illustrated blueprint for making geology part of the remit of the national conservation strategy. This has been launched on the back of the concept of 'geodiversity' – neatly segueing on to the biodiversity bandwagon. I believe this approach has much to recommend it. People need to be shown that a quarry is not an eyesore, but a window to the past. There are individual sites where the geology is blatantly exposed and well explained. The Wren's Nest – that famous Silurian landmark in the industrial midlands – has just celebrated 50 years as a National Nature Reserve, and the 'nature trail' around it is a good example of how to do it. The boat trip underneath it still tingles the spine. Maybe the people that go on the tours will begin to realise how the whole of the industrial area grew from geology.

There is a danger that the main way geology impinges on the public is as the source of materials that cause climate change. I would prefer to think that, as we embark on our 200th birthday year, geological awareness should be a source of pleasure – an increased perception of the richness of the national landscape, of which the geology is an essential part. Maybe this is where the perception of the artist and that of the naturalist meet on common ground.

**Natural foundations: geodiversity from people, places and nature.* ISBN 1 85716 900X

"Reprinted from *Geoscientist [Volume 16; No 12; page 2.]* with permission"

MEETING REPORT

MONDAY 27TH NOVEMBER 2006 *(Indoor meeting)*

Members' evening

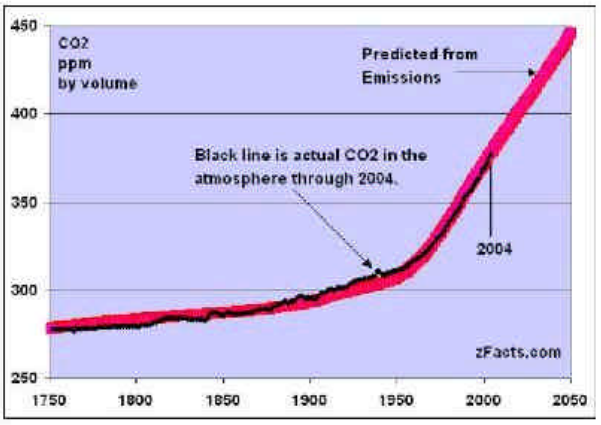
This was excellent evening with several superbly illustrated talks. Unfortunately, our meetings secretary *Gordon Hensman* was ill, and could not be with us. Chairman *Alf Cole* conducted affairs.

Peter Twigg described the geology of the Alps, particularly the area around the Matterhorn. His slides were stunning, and this picture is of Palaeozoic metasediments of the Valpelline series, which make up the very top of the mountain

Equally impressive were the photographs that *Alan Ledbury* projected in his PowerPoint. "Santorini, dormant not extinct" could be the title of this photograph, the Mediterranean island caldera which exploded in 1628 BCE destroying the Minoan civilisation and possibly the source of the legend of Atlantis.

We were ready to pack our bags, can you fly to Santorini via the Matterhorn? Although, as Alan pointed out, Santorini is best approached by sea, when you get the unfolding vista that the ancient mariners must have experienced.

There are not many super pictures of Global Warming, but *Martin Normanton* illustrated his talk with some interesting data and graphical representation. The main thrust of Martin's argument centred around the role of Carbon Dioxide that has been largely produced by human activities. One of the 'hockey stick' graphs is shown here.



Our mineralogist, *Spencer Mather,* always comes up with some spectacular specimens, and this evening was no exception. This particular one is a 'Star Agate', from Lower Silesia. It is in a silica rich volcanic tuff and the star shape is probably due to the quartz being injected under pressure and then spreading along lines of weakness to give a radiating pattern. The possible point of injection is on the left hand side of the photograph. No scale I am afraid, except the plastic wood grain on the table top.

The Alps, Santorini, Silesia, the whole planet, is there no end to the travels and worldwide locations of our members' experiences. Well, Bill Groves started the evening with a description of the Permo-Trias in the Black Country including visits to the Kidderminster Conglomerate in Brierley Hill Road, Wordsley, and sites in Wall Heath and Wombourne. There was a brief mention of the Vale of Eden, but somehow it did not have the attraction of the other localities.

All in all it was a wonderful evening, interesting talk, spectacular pictures, good food and conversation; but above all good company.

Bill Groves

FROM OUR MEMBERS

A letter from Gordon Hensman

I was very interested to read Bob Bucki's reply to my last letter in which I allocated the study of Global Warming primarily to the science of Meteorology i.e. physics of the atmosphere. Of course, Bob is correct to draw attention to the view that the "planet is best considered as a, "whole earth system". Those readers familiar with James Lovelock's Gaia theory will understand and probably endorse this view as indeed I do.

The Oxford Dictionary's definition of geology is "the science which investigates the earth's crust, the strata which compose it, with their mutual relations and the successive changes to which their present condition and positions are due," "The science which treats of the earth in general." Meteorology is defined thus. "The study of or the science that treats of the motions and phenomena of the atmosphere, especially with a view to forecasting the weather." Bob says that I "disassociated geological processes from climate systems". This would be contrary to my interest in both disciplines, and I am well aware that the atmosphere originated from the "outgassing" from the solid and liquid earth's surface over a very long period of time.

It may well have been true that a clever man in the 17th century was just about able to "know" all the scientific knowledge there was to know, but this has long since been impossible. The inevitable result is the division of science into manageable portions based on a modicum of precision and also somewhat arbitrary allocations of knowledge. Of course the danger with this is that the student of a particular discipline will not see how it links up with all the others. However, this has resulted in, for example, the geological sciences/earth sciences (stratigraphy, petrology, palaeontology, sedimentology, geomorphology etc.), and the science of the atmosphere (meteorology, climatology).

Now most readers will immediately see the overlap and linkage between geology and meteorology. For example, pedology. Soil is the product of the rocks around which give it its mineral content, the weather which dictates the type of weathering and erosion and the organic content derived from the macro and micro fauna and flora which depend in turn on the weather/climate and the mineral content.

So-called Global Warming is a feature of the atmosphere in as much as it is the result of an alteration in one of the parameters which make up global climate – the temperature, which has always been a property of the atmosphere. The absorption of long wave radiation from the earth's surface has always taken place, and the amount depends on the presence of the greenhouse gases of water vapour, carbon dioxide and methane, (the soaking up of LW heat by ozone is a feature of the stratosphere not the troposphere). If the proportion of one or more of the gases changes then the amount of LW heat absorption will alter. The present warming is due to the increase of these gases as a result of the anthropomorphic emission emanating from the combustion of fossil fuels – there's your link to geology!

In claiming everything for geology there is the risk of courting the absurd. For example, it could be argued that human history is a geological phenomenon, and therefore WW2, the Spanish Conquistadors and Henry VIII's break with Rome originated within that scientific discipline. However, it would scarcely be sensible!

I think I have established that the actual atmospheric processes involved in global warming, are meteorological – after all it was discovered by meteorologists not geologists. It is in the University Meteorological Departments, such as the Hadley Centre for Climate Change in the University of East Anglia, and also Reading University where research into global warming is taking place – not withstanding the valuable contributions made in ice coring and deep sea cores from geologists and glaciologists, with other contributions from scientists in a number of other disciplines. Let us therefore, for sanity's sake, keep these broad distinctions between the scientific disciplines whilst recognising their interrelationships and also the complexity of the whole earth system.

GEOBABBLE

Geobabble was the idea of Graham Worton a couple of years ago. There are so many words being used in Earth Sciences that are amusing or odd, whether it be calling a conglomerate a 'silirudite' or describing the land surface as the 'free air interface'. We have also looked at quirky or offbeat geological information. However, for this edition I am highlighting a very important geological term which must be the most used and relevant new word in Earth Sciences. ***Geodiversity*** seems to have suddenly hit us in 2006. When was it first used, and by who? My limited research has revealed very little. In the 1993 edition of *The Encyclopedia of the Solid Earth Sciences* there is nothing between *geodesy* and *geodynamics.* Similarly in *The New Penguin Dictionary of Geology* of 1996, there is the identical sequence of terms. *Wikipedia,* the online encyclopedia has a good coverage, and when I put geodiversity into Google, there were 94,600 hits.

A most interesting review of the terms Geodiversity, Geoconservation and Geovalue has been made by Peter Scott and David Roche in *Geology Today**. They point out that geodiversity has been championed by Natural England and most energetically by local RIGS groups. (Regionally Important Geological Sites) From this source have grown Geodiversity Action Plans (GAPS) and the companies that own and operate the quarries have been developing Company Geodiversity Action Plans (cGAPS). For five years now there has been money available from the Aggregates Levy Sustainability Fund (ALSF) to practically promote geodiversity.

Any views or information from members on this topic would be most welcome, as would any letters or observations on anything geological that we can put in our 'from our members' part of the Newsletter. The last paragraph also reminds me that perhaps we should be looking at acronyms again, there seem to have been a large number of new ones, and they are often most annoying. TTFN

Bill Groves

The Encyclopedia of the Solid Earth Sciences (1993) EDITOR-IN-CHIEF: Philip Keary. Blackwell Scientific Publications. ISBN 0-632-03699-0

The New Penguin Dictionary of Geology; Second Edition (2001). Philip Keary ISBN 0-14-051494-5

Wikipedia: http://en.wikipedia.org/wiki/Geodiversity

Geology Today. Volume 22, Number 6, November/December 200, 6 page 207.
Information on this magazine from http://www.blackwellpublishing.com/gto

CONTACT US

As ever we would love to hear your news and views, particularly for the *'From our Members'* spot, so please put pen to paper or fingers to keyboard and give us your thoughts. We are often able to print photographs that are sent by email or colour print. 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 February Newsletter, please send or give it to one of the Editorial Team by ***Monday 5th[h] February 2007***

EDITORIAL TEAM		
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Copy date for February Newsletter is **Monday 5th February 2007**

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