



NEWSLETTER NO. 127

FEBRUARY 1998

The Black Country Geological Society

The Society does not provide personal accident cover for members or visitors on field trips. You are strongly 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 in the Banquet Room (Dudley Suite) at the Ward Arms Hotel, Birmingham Road, Dudley. Phone: (01384) 458070. 7.30 p.m. for 8 o'clock start.

MONDAY 23rd FEBRUARY 7.45 p.m. ANNUAL GENERAL MEETING.

Followed at 8pm (approx.) by a lecture 'Laterites can be fun!' by Dr. Des Bowden (Society member/Newman College, Birmingham).

Laterite is a deposit resulting from intense chemical weathering of a wide variety of rocks, basalt, gneiss, slate, granite etc. Much of the silica content has been removed in solution to leave behind hydroxides of iron, aluminium or manganese - BAUXITE is a laterite with a high aluminium content. Laterites are often responsible for the red colour seen in tropical landscapes.

Dr. Des Bowden writes: "Laterites with their associated weathering residua and landforms are found widely over the tropical world. The talk will be illustrated by reference to my researches in Sierra Leone, The Gambia and Malawi. I hope to raise awareness of an interesting topic which is often neglected by geologists and geomorphologists who live in temperate climates."

DR. BOWDEN (who is a Society member) is Head of Geography at Newman College. He studied at the University of London, taking his first degree in Geography and his PhD on Tropical soils and related subjects. He has held a lecturing post in geography in Sierra Leone and has paid many visits there and to other parts of Tropical Africa. His researches in the area will form the subject of his lecture.

THURSDAY 19th MARCH. This additional meeting will NOT now take place.

MONDAY 23rd MARCH. Lecture: Environmental geology - examples from Finland and the UK. By Dr. Roger Dackombe (Wolverhampton University).

This lecture will examine the role of geology - and in particular 'environmental geology' - in determining courses of action when environmentally sensitive activities are being planned. These can include mineral extraction and development of water supply sources; geologists can point to the most suitable strategies to minimise disturbance and make the best use of available resources.

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Dr. Dackombe has considerable experience of Finland and will contrast geological environmental problems there with those in the U.K. The two areas have significantly different geology: there are great differences in climate, in the countries' latitude, and in surface terrain, and these lead to different solutions to their environmental problems.

DR. ROGER DACKOMBE is Senior Lecturer in Environmental Science at Wolverhampton University and he is also involved in running post-graduate MSc courses on environmental geology in Finland and Hungary, to which countries he pays regular visits. His geological interests are Quaternary Sediments and Applied Engineering Geology, while his particular research interest is in the Isle of Man. He has researched glacial sediments and till sequences in the IOM, he is Geological Consultant to the Manx Government for environmental questions, and works with archaeologists from Liverpool University studying Manx archaeology in its geological context.

This lecture is the one scheduled for January 1997 which had to be postponed because of illness.

FRIDAY 27th MARCH (10 am to 8 pm) and SATURDAY 28th MARCH (10 am to 6 pm.) at The Natural History Museum, Cromwell Road, London SW7 5BD London. The Fossil Roadshow organised jointly by the BBC and the Natural History Museum.

Do you have fossils in your collection that you are unable to identify? Would you like to know more about their scientific significance? Have you found interesting fossils you wish to discuss with the experts? This is a two day televised event at the Natural History Museum where you can meet the experts who will try to identify your fossils. The Natural History museum also hopes to hold relevant lectures during the roadshow. There is no charge to attend the roadshow. The Museum is offering a special concessionary rate if you wish to look around the rest of the museum. If you have unusual fossils and interesting stories Sarah Fisher would love to hear from you before the event. Contact her on 0181 752 4915 or write to her at the Fossil Roadshow, Room 4150, BBC White City, 201 Wood Lane, London W12 7TS.

SUNDAY 29th MARCH. In conjunction with Discover Dudley Day, the **Great Bug Hunt** is to be held at Wrens Nest. Probably starting at 10 am, BCGS members are urgently needed to help the public find and identify fossils. Volunteers please give your names to Graham Worton who will publicise arrangements.

MONDAY 27th APRIL. Lecture 'Hidden secrets of some Carboniferous Corals' by Dr. John Nudds (Manchester Museum).

This lecture looks at some common species of corals of the Carboniferous period, and in particular at morphological features and variations that occurred in them. It will show that these variations can reveal a wealth of information about the environment, palaeogeography and even the astronomy of the times when they were growing. The lecture will also illustrate rejuvenescence (*i.e. how a species can evolve backwards to a less-developed form*), diurnal growth lines, microstructure, and other unusual features which can be seen by microscopic examination of these corals.

DR. NUDDS graduated at Nottingham University then obtained his PhD at Durham studying Carboniferous rugose corals. This was followed by a 3 years Fellowship at Trinity College Dublin, staying in Ireland for a further 8 years, latterly as Curator of TCD Geological Museum. Currently he is Keeper of Geology at Manchester University Museum, and is also Chairman of the Geological Curators Group.

SUNDAY 10th MAY - Field meeting to Shropshire to study the Cambrian and Ordovician strata. Leader: Dr. Paul Smith (Birmingham University).

Paul Smith led a field meeting for us last year looking at Silurian strata in Shropshire, and this meeting will complement it by studying Cambrian and Ordovician rocks around Church Stretton and also the well-known section along the River Onny near Craven Arms.

MEET 10.30 a.m. at the main car park in Church Stretton (GR: 453936). When travelling along the A49 Ludlow-Shrewsbury road, turn into Church Stretton at the traffic lights. After 200 yards turn left into the car park.

Site to be visited will probably include:

- * Comley Quarry (GR 484964) a classic site near Church Stretton for the Lower Comley Sandstone and Limestone (Lower Cambrian).
- * Hope Bowdler unconformity (GR 474294) with Harnage Shales (Ordovician) resting unconformably on Uriconian Volcanics (Precambrian).
- * Alternata Limestone (Ordovician) at Charwall (GR 514975).
- * Onny Valley section (GR 429852 to 411861) showing a spectacular sequence of Ordovician strata exposed along the River Onny for a distance of over a mile.

DR. PAUL SMITH is Curator of the Lapworth Geological Museum, Birmingham University, and he is also on the academic staff of the School of Earth Sciences. He is one of our own members and has been a good friend of the Society in many ways, lecturing and leading field meetings, also welcoming members to the Museum for displays and lectures there.

FRIDAY 12th - SUNDAY 14th JUNE. WEEKEND FIELD MEETING to Hertfordshire, based at St. Albans.
Leader: Dr. John Catt (Quaternary Geologist, Rothamstead Experimental Station, Harpenden).

This geological weekend will give us a chance to see horizons not normally available to those of us living in the West Midlands, in particular we will visit exposures from the Cretaceous, Tertiary and Quaternary periods. These will include Lower, Middle and Upper Chalk at Totternhoe and other sites, the famous Hertfordshire Puddingstone in situ and in buildings, Lower Greensand at Leighton Buzzard/Woburn Sands and a range of glacial features.

SEE THE SEPARATE SHEET GIVING DETAILS AND AN ENQUIRY FORM WITH THIS NEWSLETTER.

FRIDAY 21st - SUNDAY 23rd JUNE. Geologists Association weekend field meeting to Norfolk. BCGS members are welcome to attend. Details and booking arrangements will be announced later.

SUNDAY 5th JULY. Whole day field meeting to Snailbeach historic site. Leader: Peter Sheldrake.
This will be an extended version of the evening field meeting held last June, which proved to be too short in time to cover the various points of interest.

FRIDAY 21st - MONDAY 24th AUGUST. Geologists Association weekend field meeting to the Edinburgh area. BCGS members are welcome to attend. Details and booking arrangements will be announced later.

SUNDAY 27th SEPTEMBER. Field meeting to Southam Quarry and Burton Dassett. Leader: John Crossling (Warwickshire Museum).

NOTE CHANGE OF DATE FOR THE MEETING BELOW - IT WAS 19TH OCTOBER

MONDAY 26th OCTOBER. Lecture: "A glimpse of Namibian geology with an excursion to Kimberley and its diamonds" by Dr. A.C. Waltham (Nottingham Trent University).

MONDAY 9th NOVEMBER. Lecture: "the Miravelles geothermal system, Costa Rica". By Dr. C.A. Rochelle (British Geological Survey, Nottingham).

MONDAY 30th NOVEMBER. Lecture on mineralogy by Spencer Mather (Society Member).

EDITORIAL

This newsletter brings word of exciting developments. An item absent from our programme for a number of years is a weekend field trip but this event is reinstated with the announcement of a weekend to Hertfordshire. (Which of you recall Dogellau, Hawkshead and Angelsey? Some, I'm told, can still feel the aching limbs and even without the geology will never forget washing down the walls of Hawkshead youth hostel and the gourmet food and washing up arrangements at Dogellau.) I hope that the visit to St Albans will be well supported. The programme illustrates the debt we owe to so many professional geologists who serve the society by giving up their limited time to enlighten us by their knowledge and inspire us with their enthusiasm. What a debt we owe to such lecturers and field leaders.

The BBC Science and the Natural History museum announce 'The Fossil Roadshow' and where the media and the Natural History Museum go, Dudley and Dudley Museum are never far behind. Thus in conjunction with Discover Dudley Day, the Great Bug Hunt is to be held at Wrens Nest on Sunday 29th March and B.C.G.S members are asked to play their part by offering their services to Colin Reid and his team, through Graham Worton, to spread knowledge of Dudley's fossils and transmit their enthusiasm for Geology to the residents of Dudley and surrounding areas. (See the newsletter for further details and volunteer!)

REPORT

Lecture on Monday 24th November. Collecting trilobites in the U.K. a Cooks Tour of productive sites by Dr. R. J. Kennedy.

As a student Bob Kennedy had to research the trilobites of south west England from Somerset to Cornwall and that was the start of his enthusiasm for the subject resulting in his present day encyclopaedic knowledge. Paradoxically this area is tectonically smashed and has been greatly distorted by heat so that many of the fossils found are not suitable as bench marks. Since then he has studied and visited all the sites in the United Kingdom from Cornwall to Ayrshire including the old classical locations as well as new sites whose locations have not been published.

Trilobites are the best known class of marine Arthropods, were probably the most abundant animals of their time, have been found in lower Cambrian sediments but eventually became extinct in the Permian. About 13,000 species have been identified including two named by the speaker and new species are being recorded as world wide knowledge increases.

Individual species lived for long periods and their size varied from 2mm to 65cms. All adults had head shields, thorax and tail shields but their appendages varied considerably. Some had eyes one third the size of their heads whilst others were eyeless and relied on spines to locate food. The soft body parts were protected by a carapace or shell which was shed several times as the animals grew, the number of segments of the thorax increasing with growth, with the result that the carapace for the earlier stages of growth is very different to that of adults.

The speaker warned against the discarding of the external mould after releasing a fossil, the surface details will frequently be well preserved and clearly revealed by a latex impression and these may not be evident on the fossil.

A hand out was provided listing the 30-40 locations where trilobites have been found and Dr. Kennedy took us on Cooks Tour providing thumb nail sketches of each site. As usual, Murphy's Law applies, that most easily accessible sites with good specimens are frequently visited so that in some cases a charge is made by the landowner and general access has been prohibited at others for various reasons. More remote sites with good specimens tend to be inaccessible, difficult to find and protected by crumbling cliffs or dangerous quarries. In one situation Highland cattle are a considerable hazard.

The locations of two excellent sites were not disclosed and details are not available for general publication. The land owners in question have made it clear that they are not prepared to allow access except in exceptional circumstances and permission will rarely be forthcoming. In a nutshell, they consider that visitors to their property interfere with their own activities however innocent the intention.

Both sites have lots of species and at one of the locations there is an unusual rock with the appearance of liquorice allsorts, consisting of a series of black and white stripes. Pyroclastic tuffs in the form of white ash has settled on the sea and has been covered with dark mud, the series being repeated several times. It is possible that at some time in the future, with a change of ownership there may be more open access, but in the meantime there are lots of locations for searching.

Following the lecture by Dr. Kennedy, Colin Reid of Dudley Museum showed a slide of the Dudley bug *Calymene blumenbachii* and narrated the history of a particular fossil in the museum.

About 10 years ago the museum was approached by a Mrs Wedge of Southampton who offered the museum a collection of trilobites which had been purchased from an antique dealer in Petworth some years previously. The collection was accepted and has been on display. The label for the particular fossil includes the initials HLH and on a visit to the British Geological Survey at Kegworth, Colin spotted that some of their specimens bore the same initials. Research revealed that H.L. Haroun was a collector and that he had purchased the specimen from John Gray of Dudley in 1862

John Gray was a collector, founded the Dudley and Midland Geological Society in 1842, was the proprietor of a shop dealing in fossils and also owned limestone mines. It was common practice at the time for mine owners to reward miners finding good specimens. Local records show that there were at least three shops dealing in fossils in Dudley and clearly there must have been a thriving business. The assumption is that this particular specimen came from Grays workings, was surplus to his collection and that he sold it on.

It is unlikely that the movements of the specimen from 1862 for the next 100 years will ever come to light but the story does illustrate the way in which collectors rely on finders. Will any of the specimens sold by us at the last Rock & Fossil Fair be around in 2097?

Dr. Kennedy provided a detailed hand-out on sites which is available from the Secretary.

ITEMS IN BRIEF

1. Welcome to new members
Thomas Williams of Darlaston
Scott Page of Bentley, Walsall
Paul Ryan of Solihull
2. Colin Reid hopes to tell the story of one particular Dudley bug at the Fossil Roadshow. The fossil was, a hundred and fifty years ago, in the Museum Collection donated by John Grey, founder of the Dudley and Midland Geological Society. Presumably stolen from the Dudley collection, a lady bought it at auction in Surrey and returned it to Dudley in 1987. Where had it been in the intervening period?
3. Society Sweatshirts. We are in contact with a new supplier of Society sweat shirts etc. I hope to have more information for the next newsletter.
4. Geology Today Magazine. 20% discount on annual subscription for Society members for this excellent magazine. £27.00 is the cost of the 1998 subscription for BCGS members.
5. Geological Association Guides. The 213-page geological field guide to the Lake District is reprinted and on sale to G.A. members at £6-80 and to non-members at £8-50. Compiled by friend of BCGS, Frank Moseley, it has got to be good! Copies are available from the G.A. Office, Burlington House, Piccadilly, London W1V 9AG 9 (Tel 0171 4349298).
6. University of Bristol Department for Continuing Education Geology Courses.
Geology in the Lizard peninsula 17-19 April Tuition £60
North Pembrokeshire 18-22 May Tuition £90
Pre-Cambrian Geology of the Outer Hebrides 13-19 June Tuition £120
Isle of Wight 19-21 June Tuition £60
Ice and Fire Geology and Scenery in Iceland 16-16 July £1425
Santorini - Living with a volcano 10-24 September £852
For more details contact the department at 8-10 Berkeley Square, Clifton, Bristol BS8 1HH Tel: 0117 9287 155
7. Open University Geology Society - Day of lectures - 14th March
Lectures to be held at Birmingham University from 10.30 a.m. to 4.30 p.m. include
Dr. Dave Roberts (Staffordshire University) *Minerals - Do We Need Them?*
Professor Gilbert Kelling (Keele University) *Can Geology Solve the RADWASTE problem?*
Professor Mike Benton (Bristol University) *The Origins of the Dinosaurs*
Dr. Peter Regan (Derby University) *Iceland*

There will be a charge of £3.00. Detailed arrangements depend on the numbers attending. Parking is easy - next to the Earth Sciences Building. For further details contact Ron Whitfield Tel 01746 780218.

8. Volcanic Experiences
Alan Clewlow (lecturer in geology for O.U. and Cadbury College) hopes to lead parties of adults to Sicily and the Aolian Islands.
Saturday May 23rd - 30th £525 half board Saturday July 25th - August 1st £595 half board.
Visits to Lipari, Vulcano, Stromboli and Etna are planned.
For further details contact: Volcanic Experience, Bromsgrove, Worcs. B60 3NW
Tel/fax 0958 791176 or 01527 832578

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