



# The Black Country Geological Society

Indoor meetings are held at the Saracen's Head, Stone St.,  
Dudley. 7.30 p.m. for 8 p.m. start.

## Forthcoming Meetings:

Sunday: 12th June: Field trip to Tissington in the Peak National Park, Derbyshire led by Dr. Neil Aitkenhead of the British Geological Survey. In the morning's walk along the Tissington Trail we will examine the relationship between the interbedded carboniferous limestones and volcanic rocks at Crakelow Quarry (175544). Lunch and liquid refreshment can be obtained at the New Inns at the end of the walk. After lunch the party will travel by car to Carsington Reservoir picnic site (245500) where there is a view of the dam embankment that failed disastrously in 1984. Some members will recall the display of this site manned by Dr. Aitkenhead at the BGS open day at Keyworth in May. On the way to the dam we will stop at a stream section near Kniveton (206494) which exposes a basin facies that is probably the lateral equivalent of that seen earlier at Crakelow Quarry. The party will meet at 10 a.m. at Tissington Trail Car Park (177520) in Tissington Village about 4 miles N. of Ashbourne. Ref: O.S. Geological Sheet 124, O.S. Sheet 119.

Monday: 20th June: Evening field trip to Ham Dingle, Stourbridge - a local nature reserve with exposures of the Triassic. Meet at 7 p.m. in the rear car park at Foley Arms, Ham Lane, Stourbridge. Ham Dingle has exposures of the Carboniferous and is in proximity to the western boundary fault. The Halesowen series, Keele beds and Clent Breccia (on Wychbury Hill) will be examined together with the Wildmoor formation of the Triassic. Ham Dingle is also a nature conservation site and should therefore be of general interest to non-geologists as well.

Monday: 11th July: Evening field trip to Bilston Open cast where we will be guided by the site geologist. Meet promptly at the Open Cast site office in Bilston by 7 p.m. Entrance half way along the south side of Millfields Road, Bilston. Best approach by Birmingham New Rd. and Manor Spring Rd. This is an excellent opportunity to view the coal measures at close quarters in fresh sections and is an evening not to be missed.

Sunday: 18th September: Field meeting to South Wales carboniferous limestone led by Sue Gibson (joint meeting with Shropshire Geological Society). This will be a walk of about 4½ miles in some of the best scenery in South Wales, all inside the Brecon Beacons National Park, finishing at Pont-y-dd-Fechan in the Vale of Neath.

The walk follows the River Mellte which disappears underground where it crosses the carboniferous limestone and reappears, flowing through a gorge and over several waterfalls. The features are a result of the geological structure and lithologies together with the effects of river capture and rejuvenation in late Tertiary times.

Meet at the Port-yr-Ogof cave car park (927122), Ystradfellte, about 8 miles N. of Aberdare at 10.30 a.m.

NB: Although in South Wales, journey time from the W. Midlands is 1½-2 hours by the M5, M50 and Heads of Valleys road (A465) to Hirwaun.

Monday: 17th October: Lecture "Those incredible limestone

Chairman  
Alan Cutler BSc M.CAM  
DipM MInstM

Hon. Secretary  
Paul Shilston MA CEng  
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mountains of South China" by A. C. Waltham of Trent Polytechnic, Nottingham. Limestones often form Karst scenery with surface and underground features - gorges, potholes, sink holes and caverns but in South China they are developed to a spectacular degree. There are Cambrian limestone pillars in one area known as the stone forest as well as the river gorges and pillars often seen in Chinese paintings.

November: Field trip to Cleve Hills, Shropshire visiting Brown Cleve and Titterstone Cleve. Leader Tim Pearce who comes from the area and is at present studying for a Ph.D on the geology of Madeira.

Monday: 5th December: Lecture by Nigel Chapman of the Black Country Museum (mining group) "The Racecourse Colliery Mine".

#### EDITORIAL:

Recently it has been said that geology is in the doldrums nationally and that interest is on the wane but, as anyone at Keyworth for the BGS open day on May 8th will testify, Geology is thriving. With car parks overflowing and the village streets crammed, many thousands of visitors came from all over the country and a very worthwhile journey it proved to be. B.C.G.S even managed to hold an informal meeting of over a dozen members beneath the statue of Hercules!

The exhibits were varied and entertaining and a good selection of book and gift stalls complemented them. I managed to question the NRPB on what 3 years living near Redruth in the Radon emissions had done to me; to find out why we are supposed to be pleased about the NHBC 10 year guarantee on new homes "we find sir, that most problems occur in the 8th, 9th and 10th years," and managed to resist the temptation to part with several hundred pounds on a portable dredger for my quest for alluvial gold. Maybe I ought to have settled for the electronic 'Goldspear' a snip at a mere £595.00 - "just stick it in the ground, sir, and it'll beep when it detects gold" - so would I! One of my favourites however was the Chunnel exhibition, showing just what an incredible amount of research has been done on the link over the last two centuries. Overall it was a marvellous day out.

This month's newsletter shows one of two

changes to our autumn programme - please make a special note of new or revised dates, times and places. Finally, in the 'from the papers' section I include an advert, albeit censored. Perhaps it is a pointer to the future when the topic of conversation at chic yuppie dinner parties will be undoubtedly geological. Maybe Sarah would like to join BCGS?!

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#### Field Trip to Abberley Hills:

The Abberley Hills provide us with a nearby example of a Silurian inlier with interesting lithologies and structures, the latter being related to the Malvern Axis and having their origins back in Caledonian and even Pre-Cambrian basement movements.

During the Silurian a geosynclinal trough lay to the West with shelf and continental conditions to the East. Muddy sequences were laid down as a result of local erosion whilst limestones formed in clearer waters. Uplift during the Caledonian orogeny resulted in shoreline, deltaic river and even flash flood deposits in the Devonian.

The Carboniferous of the area lies unconformably on the rocks below. The Highley beds represent a deltaic coal swamp sequence and the Clent Breccia represents a more erosive phase as uplift continued in late Carboniferous times. In the area the breccia is found as a thrust sheet capping the top of Woodbury Hill although very poorly exposed.

Triassic sands and marls are easily located in the area by the red to grey colour changes in the soil. Head and other solifluction deposits complete the regional lithologies.

Our first stop was at Penny Hill Quarry in Pudford Lane where Wenlock limestone is well exposed. The structure within the quarry has presented a problem to which geologists have produced two solutions. The first, by Groom (1900) suggests an overfolded anticline, the second by the IGS more recently suggests no axis in the quarry, just a continually dipping series of right-way up strata with an axis well to the West. We were asked to observe and give our opinions as to which view was correct by identifying way-up criteria - mud cracks, geopetal structures (mud settling inside brachiopod shells showing original position) and the growth of colonial organisms proved to be the best examples. The end result was much debated but the conclusion - Groom 1, IGS 0. A fine

geopetal structure was found but in a fallen block! In the North East of the quarry the bedding is clearly disturbed by the Penny Hill thrust. The Wenlock limestone here is highly fossiliferous with blocks of biohermal limestone. One steeply dipping (and soon to be rubbish filled) bedding plane provided a fascinating range of fossils including Orthoceras, pygidia of Dalmanites and numerous brachiopods, corals and crinoids.

The view from the northern end of the quarry provoked much speculation on how the Clent Breccia found its way up Woodbury Hill. Could it be unconformable?

A second stop at Burrellhill farm showed the Aymestry Limestone (upper Bringewood beds) dipping East at 80° and just how much shale it actually contains. Leptaenid brachiopods were abundant in the muddier portions. The final locality was spectacular - Woodbury Quarry where vertically bedded Silurian muddy limestones of the Lower Ludlow Shales occur, stained red by percolating groundwater from the overlying boulder clay deposits, their only outcrop on the Abberley Hills. On the West side members found evidence of organic matter including fish scales in the position of the Ludlow bone bed. Our final effort was to climb the clock tower at Abberley School - a feat in itself given the widespread guano deposits. The view was magnificent and vertigo inducing as our guide outlined the history of the tower and its clock. Dr. Gliver then showed us a core-sample from Shavers End Quarry proving the Dittonian ORS beneath the Ludlow beds, necessitating a correction to some recent cross-sections.

Many thanks to Dr. Peter Gliver for a very enjoyable day.

Andrew Rigby:

#### B.C.G.S. NEWS:

#### Field courses:

##### A. Field studies council.

1. Geology, Landscape and Climate courses - a series of around 25 residential courses e.g. Ice Age in Snowdonia: Rocks, Minerals and

Mines; Geology and Scenery of the Borderland; Geology and Scenery of Pembrokeshire Coast; Shaping of the Dales; Rocks, Minerals and the Microscope; Geology and Scenery of the Church Stretton area. Full details and location of centres from Editor or FSC Information Office, Preston Montford, Montford Bridge, Shrewsbury SY4 1HW.

2. Overseas expeditions - a range of overseas short and long expeditions to Jamaica, Kenya, Gibraltar, Azores, Nepal, Sicily, Seycelles, China and Malaysia to name but a few. Prices range from a few hundred to over £2,000. Details from editor or Miss Ros Evans, Flatford Mill Field Centre, East Bergholt, Colchester, Essex, CO7 6UL. Tel: (0206) 298283.

##### B. University of London Extra Mural Dept.

1. Geological field meeting in Turkey, May 1989 for two weeks. Cost including flight and accommodation £650. Limit of 30 people. Application by post after 20th June or in person on their open day (24th June) at 26 Russell Square, London. A deposit of £50 is required.

2. Lipari and Sicily. 22-29th October, 1988. Visits to Etna, Stromboli and Vulcano. Cost £410 including flight, half-board and accommodation. A very interesting way to spend autumn half-term and BCGS will be represented. Limit of 20 people. Interested? Contact Michael Bamlett at 26 Russell Sq., London WC1R 5DQ. Tel: 01 636 8000

#### BOOKS, GUIDES, ETC.

a) Palaeontological Association: 2 titles.

1. Fossils of the Chalk by Ellis Owen, ed. Andrew B. Smith. This is a field guide to fossils 306 pp paperback, £11.50.

2. Fossil Plants of the London Clay by Margaret E. Collinson 124 pages, paperback £7.95.

Available together for £18.00 plus £1 p & p from Dr. V. P. Wright, Marketing Manager, Palaeontological Association, Department of Geology, Mills Memorial Building, Queens Road, Bristol BS8 1RJ.

b) Earth Sciences History - Journal of the History of the Earth Sciences Society. Published twice a year. Individual membership is open to anyone interested and costs U.S. \$15.00 per annum. Contact HESS, c/o Kennard B. Gork, Dept. of Geology and Geography, Denison University, Granville,

Ohio, 43023, U.S.A. The journal covers all varieties of earth science and has contributions from experts worldwide.

c) Peradam Prints produce a series of high quality prints from 19th century engravings. Each print depicts a group of shells or corals. They have been enlarged to 35" x 25" and silk screen printed by hand. Available with matt or gloss laminated surface at £25. or on paper at £15. A set of 6 prints £80 paper, £135.laminated. With poster hangers. Available from Peradam Prints, 51 Clyde Road, Brighton, BN1 4NN. Telephone: (0273) 692566.

d) Several leaflets from National Geology Club including field excursions (one day and week long) to various parts of the U.K. Available from editor.

e) Books, Specimens, Maps, Equipment available from Geo-Supplies, 16 Station Road, Chapeltown, Sheffield S30 4XH. Tel: (0742) 455746. A price list is available from editor.

f) Gold Panning Kit and other more sophisticated items available from Goldspear Distributor, 30 Thornton Avenue, Macclesfield, Cheshire, SK11 7UG. Tel: (0625) 21108.

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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 insurance to the level which you feel appropriate. Schools and other bodies should arrange their own insurance as a matter of course.

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TABLE WATER TALK  
NUMBER 2

**“Basalt,”**

said Sarah.

Her husband looked up sharply. He had mis-heard.

“Basalt,” said Sarah, “is an igneous rock which most usually exhibits porphyritic structure, showing larger crystals of olivine, augite or feldspar in a finely crystalline ground-mass.”

Around the dinner table, there was no obvious sign of dissent.

“Some Basalts, it is true, contain small rounded crystals of leucite in place of plagioclase feldspar,” she added, in response to a critical glance from Gordon.

“It is one of the hard volcanic rocks through which mineral water passes and which account for its conventional purity and unusually low mineral content. There simply is nothing more pure,” she went on as she poured herself a glass of from the blue plastic bottle on the table.

Basil brooded on these thoughts. Sarah did not often talk like this. He brooded, too, on the handsome young mineralogist they had met water-skiing at Honfleur.

## REPORT OF ANNUAL GENERAL MEETING

The thirteenth AGM of the Society was held at National Museum of Wales, Cardiff, on Saturday 12th March 1988.

Anne Sutcliffe gave her Treasurer's report, which indicated that financially the Society is marginally better off than at the end of 1986. For 1988 there would probably be increased expenditure, but the present level of subscriptions should cover this.

Anne announced her resignation from the post of Treasurer, and from the committee, due to pressure of work - this resignation was received with regret, and with thanks for her efforts in the past four years as Treasurer, and during previous years as Field Secretary and on the committee.

The chairman, Alan Cutler, presented his report for 1987 - this report was circulated with the April 1988 newsletter.

### Election of officers and committee.

Alan Cutler (chairman), John Gollidge (vice-chairman), Paul Shilston (hon. secretary), Graham Worton, Steven Hughes and Andrew Rigby (committee members) were re-elected.

Judith Shilston was elected to the post of Treasurer.

John Easter announced his resignation from the post of Field Secretary, and from the committee; this was accepted with regret and thanks for services rendered.

The posts of Field Secretary and one-committee member are now vacant; it was agreed that the committee could coopt members, when occasion arose, during the year.

After the AGM members toured the exhibition DINOSAURS FROM CHINA.

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