



The
Black
Country
Geological
Society

NEWSLETTER NO 85 FEBRUARY 1991

Lecture meetings are held at the Saracens Head, Stone Street, Dudley 7.30pm for 8 o'clock start.

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.

FUTURE PROGRAMME:

MONDAY 25TH FEBRUARY

7.45pm Annual General Meeting.

ANY NOMINATIONS FOR SOCIETY OFFICERS OR COMMITTEE MEMBERS SHOULD BE SENT TO THE SECRETARY OR CAN BE DECLARED AT THE AGM.

Followed at 8.00pm by "Geology in paradise" a talk on the Hawaiian Islands by Paul Shilston.

Paul was in Hawaii in 1989 and will describe the Hawaiian Islands with their stunning scenery as well as their fascinating geology. Situated above a 'hot-spot' they enable geologists to look deep into the asthenosphere, the relatively stable region below the plates. Since the islands are on a moving plate, they also show the whole range of volcanic features from active eruptions to old cones eroded down to sea level.

MONDAY 25TH MARCH

Lecture: Abandoned limestone mines in Dudley - progress and structural geology"

Joint presentation by:

Alan J.R. Evans, Consulting Engineer
Adrian Collings, Ove Arup & Partners.

Alan Evans and Adrian Collings have been involved with abandoned limestone mines in the Dudley area, in particular with the investigation and treatment of old workings now in a dangerous condition.

The lecture will review the progress made and the issues to be faced in the future. It will also outline the geological background to this area of the Black Country.

Adrian Collings is also a member of this Society.

SUNDAY 15TH APRIL

Field meeting to North Staffordshire.

Leader: Mr. John Armitage.

Meet 10.15am at the Natural Sciences Centre and Observatory, Newchapel, Kidsgrove (grid ref: 862549). This is about 1.5 miles east of Kidsgrove town centre.

Chairman
A. Cutler B.Sc., M.C.A.M.,
Dip.M., M.Inst.M.

Vice Chairman
J.E. Gollidge M.A.

Hon. Treasurer
Mrs J. Shilston

Hon. Secretary
P.D. Shilston M.A., C.Eng.,
F.I.E.E., M.I. Mech.E.

A suitable route is to leave the M6 motorway at junction 16, then along the A500 eastwards for 3 miles, to its junction with the A34 (roundabout). Then north along the A34 (signed Kidsgrove) for 2 miles to traffic lights at its junction with the A50 (grid ref: 829552). At the traffic lights turn right (south-east) along the A50 (Liverpool Road) then follow the attached map. The Natural Sciences Centre is approached along a small track off Newchapel High Street.

The programme will include a tour of the Natural Sciences Centre, exposures in the Mow Cop area including its mineralisation and probably a visit to an opencast coal site at Biddulph. The lunch stop will probably be at the Mow Cop Inn.

John Armitage is well known in the West Midlands for his lectures, evening classes and field trips, and can be relied on to provide a really worthwhile day out.

This is a joint meeting with our friends of Shropshire Geological Society.

SUNDAY 19TH MAY

Half day (afternoon) field meeting to Saltwells local Nature Reserve. Leader: Alan Cutler.

Meet 2.00pm at Saltwells Inn, Netherton (off Saltwells Road). Grid ref: 935869. It is about one mile east of the Merry Hill shopping centre.

This area has an interesting range of geological features, including Doultons Claypit with its sequence of Carboniferous strata, the canal section at Netherton showing Devonian and Carboniferous strata with an igneous intrusion, and Saltwells Wood with its old coal workings.

MONDAY 3RD JUNE

Lecture: "Earthquakes" by Dr. I.G. Stimpson, Keele University.

It is some years since the Society had a lecture on a geophysics subject, so we are glad to welcome Dr. Stimpson to update us on recent developments. His lecture will cover the subject of earthquakes in general and will review current developments.

Dr. Stimpson is an Earthquake Seismologist in the Geology Department at Keele University. He gained a PhD for his research on earthquakes and his particular interest is in studying the origin of deep earthquakes, visiting Turkey, Chile and Brazil in the course of his work.

FRIDAY 14TH - SUNDAY 16TH JUNE

Weekend field meeting to North Devon coast. Based at Barnstaple. Leader: Michael Bamlett, Birbeck College, University of London.

The field meeting will examine coastal rocks and scenery between Westward Ho! and Baggy Point.

Cost £20 (not including accommodation) for Friday evening to Sunday. An additional whole day with the leader for a surcharge of £5.

FURTHER DETAILS AND BOOKING FORM AT THE END OF THIS NEWSLETTER.

MONDAY 24TH JUNE

Evening field meeting - "The building stones of Birmingham".

Leader: Paul Shilston.

Meet: 7.00pm at the Hall of Memory, Broad Street, Birmingham.

A guided walk in the city centre, looking at the various types of building stones used in some of the important public and commercial buildings including recent buildings and the new Convention Centre.

SUNDAY 22ND SEPTEMBER

Field meeting to Cross Hands Quarry and Sharps Hill Quarry, near Chipping Norton, Oxfordshire.

Leader: John Crossling, Keeper of Geology, Warwickshire Museum.

Meet 11.00am at Cross Hands Quarry next to Cross Hand pub. (Grid ref: 269290). The quarry is on the A44 road, about 4 miles west of Chipping Norton.

OCTOBER Lecture.

NOVEMBER Field meeting.

MONDAY 2ND DECEMBER

Lecture: Geology in South Africa by Malcolm Callow.

MONDAY 13TH JANUARY 1992

Lecture: W.J. Harrison (1845-1908). Birmingham geologist and photographer. A historical lecture illustrated by Harrison's own photographs.

Lecturer: Peter James, local studies Archivist, Birmingham Central Library.

EDITORIAL

THANKS AND FAREWELL

Andrew Rigby has been a member of the BCGS for over six years but will soon be leaving to take up a new educational appointment elsewhere. We are very grateful for the help Andrew has given the Society during that time, in many various ways. We wish him and his family every success in their move.

For the last three years Andrew has been editor of the newsletter and the December 1990 issue was the last one that he edited. We are therefore looking for someone to take over this job.

The duties involve seeking out and assembling items for the newsletter. They do not involve producing the material, which is largely provided by others. Anyone who is interested is asked to contact the Chairman or Secretary.

15th Anniversary Dinner - Saturday 30th November

A group of members and friends assembled in the Hampton Room on the Birmingham University campus for a dinner to celebrate fifteen successful years of the Black Country Geological Society.

The speaker was Dr. Beverly Halstead, President of the Geologists Association, and we were also pleased to welcome, among others, Professor Hawkes, head of the School of Earth Sciences, Birmingham University, and Colin Reid, Keeper of Geology, Dudley Museum.

In his speech Dr. Halstead congratulated the Society on its success. He went on to outline his ideas of widening the scope of the GA so that it could act as a countrywide pressure group for geological interests, particularly when important sites are threatened by infilling or development. He hoped that local societies like the BCGS could be affiliated in some way yet still keep their independence.

It was a pleasant social occasion enjoyed by all and we were particularly fortunate that we avoided the snow and blizzards which blacked out all functions planned for the following Saturday.

Now for the next fifteen - or fifty! - years.

November 19th. Lecture: "The Hornsleasow Dinosaur Excavation and Sieving Project" by Roger Vaughan, Bath Museum

Roger Vaughan, Keeper of Geology at Bath Museum, gave a talk on the excavation carried out in 1987 at Hornsleasow (Snowhill) Quarry in the North Cotswolds. The area is shown on the Moreton in Marsh geology map. The strata are Lower Bathonian of Middle Jurassic age and were pen in tropical latitudes.

Kevin Gardner had discovered dinosaur bones in the quarry and helped with the work. Archaeologists from the Crickley Hill excavation did much of the recording in three months with grid surveys, photographs and drawings. The quarry owners were always helpful and blasted the Sharpshill beds off the top of the clay, leaving only eight inches to be cleared by hand. The quarry is famous for the Sharpshill beds, but the dinosaur bones were found in a clay lens with a drainage channel leading into it, on a karst surface. Previously clay had been blasted across the quarry because it was of no interest and fossil fragments were also gathered from this.

Ceteosaurus bones, making ten per cent of a total skeleton were found, especially vertebrae and pelvic bones. The grey clay is carbon rich, containing orange roots in the top part with fresh water gastropods. Above this is marine sandstone with dark plant remains. No footprints have been found. The hollow may well have been a pond.

The green illite-chlorite clay has been removed in many bags for sieving. There is also a grey smectite clay, common in the Cotswolds. The Hook Norton limestone is below the clay horizon, and the Chipping Norton limestone is above it.

The first dinosaur bones found were treated with spray foam to preserve them, then plaster of Paris was found to be better, with packing in foil. Photographs of the friable vertebrae being removed were shown and a femur which had been caught by a drill. Glue was applied to the femur in situ, to be removed later by acetone. It took ten men to carry the femur.

A second site has been cleared, gridded and studied and sections are left for the future. At this stage an Open Day was held to show the work to the general public. Conservation and display have continued at Gloucester Museum. Although Roger Vaughan has now moved to Bath, the work is continuing even to PhD studies.

Isopachytes - contours of the thickness of the clay beds - have been worked out from the grids. Radioactivity of the bones has been shown to be 2.5 times that of background. Twenty tons of clay have been bagged, dried and sieved, sometimes using dilute formic acid. There is a residue of limonite quartz and bone, and the quartz can be floated off.

A greater interest lies in the small fragments than in the dinosaur bones. 10,000 specimens have been mounted, including lizard and crocodile teeth, reptilian claws and fish scales. The dinosaur teeth are meat-eating. Ten true mammal teeth have been found. Fragments from the earliest European frog and salamander suggest that information on Jurassic species not yet known may well be found as the work progresses.

SHEILA PITTS

B.C.G.S. NEWS

1. THE CONCISE OXFORD DICTIONARY OF EARTH SCIENCES has recently been published containing more than 6000 entries covering all of the Earth Sciences. 432 pages. £20.00 plus £1.75 postage and packing. Available from The OUP Bookshop, FREEPOST, 116 High Street, Oxford, OX1 4BR.
2. University of Hull
- Geology and Scenery in Southern France, 22-29th June 1991, £440.
Details from: Mrs Shiela Rogers, 4 Middledyke Lane, Cottingham HU16 4NH, telephone 0482 841990.
3. University of Nottingham - geological courses
- Channel Islands 6-13 April 1991. £285.
- South Devon, based at Torquay. 4-6/7 October 1991. £72/103.
- Rocks and minerals at Nottingham. 9-10 February 1991 £16.
Details from: Dr. Ian Sutton, Dept of Adult Education, University of Nottingham, 14-22 Shakespeare Street, Nottingham NG1 4FJ.
Telephone 0602 483838.
4. University of Bristol - geological courses
These courses are additional to those in the December newsletter:
- Geology of the Northumberland and Tweed basins, based at Alnwick. 9-12 May 1991.
- Geology and field mapping - Hogwill Fells, Cumbria. 15-20 June 1991.
- The Ice Age in the Cotswolds and Severn Vale - dayschool at Cheltenham. 9 March 1991. £9.00.
- Geological miscellany VI - R. Bradshaw. Urchfont, Wilts. 15-17 February 1991.
Details and booking: Dr. P.G. Hardy, Dept of Continuing Education, Wills Memorial Building, Queens Road, Bristol BS8 1HR. Telephone: 0272 303622.
5. Geology of the Fjordland, based at Fjaerland on the Sognefjord. 9-23 August 1991. £920.
Details: Waymark Holidays, 44 Windsor Road, Slough SL1 2EJ.
Telephone 0753 516477.

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