



# The Black Country Geological Society

## Editorial:

In October the last event to mark the Society's tenth anniversary was held. Professor Hawkes came to talk about the geology of the Midlands, on the anniversary of the Society's inaugural lecture. Several members can recall that exciting event which was literally standing room only.

Over the decade, and of the many people who have helped and encouraged us, no-one deserves our gratitude and affection more than Professor Hawkes and his staff at Aston University who so willingly give their time and expertise to us, collectively and individually.

Knowing the problems and hiccups which inevitably occur in running the Society, we are bound sometimes to fail to see the wood for the trees. Professor Hawkes' sincere compliments and constructive encouragement to our work gave us renewed energy and sense of purpose.

So read page six, all you who are strong in the arm. Graham's request is a most suitable anniversary resolution. His small band has cleared three exposures, so they deserve help with the remaining twenty-one!

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## Forthcoming Meetings:

See Page 2:

Sunday October 6th: Joint meeting with Shropshire Geological Society to Cotwall End.

Monday November 11th: Talk by Dr. Margaret Oliver on "Geology and Soils."

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Indoor Meetings are held at The Saracen's Head, Stone Street, Dudley - 7.30 p.m. for 8 p.m. start. Field Meetings from outside the Saracen's Head unless otherwise stated. Those who would like lifts for field meetings, please contact Nigel Bradley.

*Chairman*  
A. Culler B.Sc., M.C.A.M.,  
Dip.M., M.Inst.M.

*Vice Chairman*  
P. G. Oliver B.Sc., Ph.D.,  
F.G.S.

*Hon. Treasurer*  
Anne Harrison B.Sc., M.B.,  
Ch.B., F.F.A.R.C.S.

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

*Field Secretary*  
N.G. Bradley

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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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Programme 1985-6:

Sunday October 6th: Joint meeting with the Dorsetshire Geological Society. Meet outside Dudley Town Hall, St. James' Road, Dudley opposite the Museum, at 10.30 a.m. Most of the day will be spent at Cotwall End, leaving cars at the Nature Centre (G.R.9130 9295). The most interesting aspect of the area is its geological variety, with some ten different series represented in an area about 1½ miles long and ½ mile wide. This variety is brought about by complex folding and faulting associated with the Western Boundary Fault of the South Staffs. Coalfield. To illustrate the geological succession, exposures ranging from the Enville Beds (Permo-Carboniferous) to the Sedgley (Aymestry) limestone, will be explored. Time and weather permitting, a visit to Sedgley Beacon will be included, from which there is a fine view over the Black Country and neighbouring counties.

Leader, Alan Cutler.

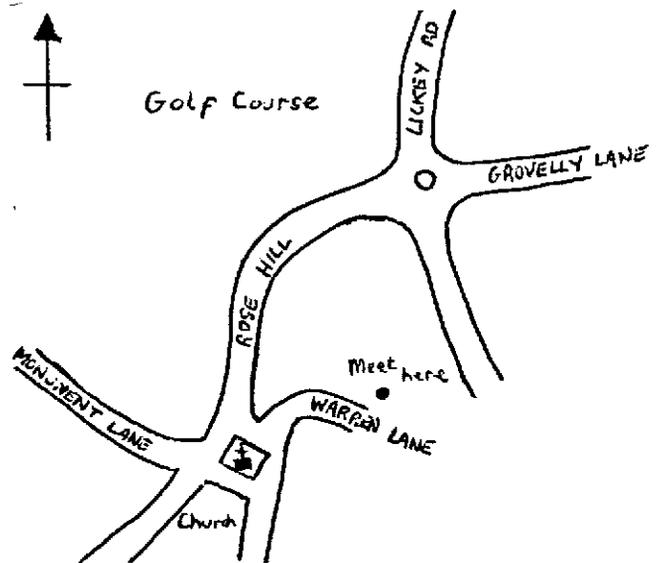
Monday November 11th: "Geology and Soils." Lecture by Dr. Margaret Oliver.

It is always pleasing when members of the Society are prepared to give a lecture, and especially so in the case of Margaret Oliver, who was one of our original committee members. She decided, despite the rigours of being a wife and mother to return to University to undertake research on the soils of the Wyre Forest, initially for an MSc. degree but later converted to a PhD. There is more to soils than just weathered rock, as we shall hear in what promises to be an enlightening evening.

For preliminary reading, see newsletters 28 and 29.

Sunday November 17th: Field trip to the Lickey Hills. Leader Dr. R. Hamblin. Meet at 10.30 a.m. at Warren Lane Car Park. The Lickeys are best known for the outcrops of Cambrian quartzite. Structurally, representing the South Eastern corner of the coalfield the geology is quite varied with outcrops of Precambrian, Silurian and

Triassic rocks plus higher members of the coal measures. Dr. Richard Hamblin is an old friend of the Society from the time when he was employed at the offices of Johnson, Poole and Bloomer whilst undertaking the resurvey of the South Staffs. coal field during the late seventies.



Friday December 6th:

A.G.M. of the Geological Curators' Group, at Dudley Town Hall, hosted by the B.C.G.S.

Monday December 9th: "The Eye of Faith in Geology." Talk by Dr. R. Bradshaw of Bristol University.

Monday January 13th: Talk on Precambrian Fossils by Dr. Trevor Ford.

Monday February 24th: Talk on the "Geology of Kenya," By Mr. W. G. Hardie. An account of the Geologists' Association trip.

Monday March 17th: A.G.M. and film.

Field meeting at Church Stretton, April 21st, 1985. Leader Mr. Andrew Jenkinson.

Church Stretton is in a classic geological area, and with so much to see nearby, it was not surprising that this field meeting provided members with a great day out. Mr. Andrew Jenkinson lives locally in Little Stretton, and knows all the important sites. We visited a total of seven sites illustrating the

geological development of the area. Starting in the Cardingmill Valley, we saw Precambrian formations running in a NW-SE direction, with younger rocks progressively appearing on either side. In some of the younger Precambrian strata there is sketchy evidence of fossils.

At right angles to the Cardingmill Valley are several hanging valleys, resulting from glaciation.

The second site was at All Stretton on the west flank of Caer Caradoc (G.R. 4795). Going SE uphill from the A49 road, an interesting Silurian sequence was seen, starting with Wenlock Limestone, followed by Ludlow Shale and Aymestry Limestone. The latter was abruptly terminated by the Church Stretton Fault, deduced from the line of springs, with Precambrian Uriconian volcanics beyond the fault. It was interesting to see that the limit of cultivated farmland coincided almost exactly with the fault line.

Comley Quarry (G.R. 485965) was something of a disappointment, in view of its world-famous reputation derived from the classic research by Murchison and others in the 19th. century. The quarry is in Lower Cambrian, mostly sandstones and shales with some evidence of turbidites, and occasional fossils. We paid our respects and passed on. Around Chatwall Hall (G.R. 514975) there was a lot of geological interest. It stands on a ridge of Chatwall sandstone (Ordovician) and is a fine viewpoint.

Looking SE one could see areas underlain by Kenley Grit, at the base of the Silurian, then further distant and going up the succession there are Wenlock Edge (Wenlock Limestone) Corve Dale (Aymestry group) and Brown Clee Hill. As a bonus a local farmer has faced his milking parlour with a selection of local rocks with a variety of fossils, so the wall of the building is a geological display for all to see. It features shallow water facies with choice specimens of brachiopods, trilobites and orthoceras.

The Hope Bowdler unconformity (G.R. 470928) is well seen at the side of the road to Church Stretton.

It shows Harrogate Shales (Ordovician) resting unconformably on Uriconian volcanics (Precambrian). Historically the unconformity was important as indicating that Uriconian rocks were older, whereas Murchison thought they were younger, than the Silurian-Ordovician.

Altogether this was a really full and interesting day, and our thanks go to Andrew Jenkinson for such a worthwhile field meeting.

Paul Shilston:

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#### Field trip to North Staffordshire:

May 19th 1985. Leader Don Steward.

A small but intrepid band met on a bleak Sunday in Leek to spend the day looking at the Carboniferous of North Staffordshire. The first halt was at the Roaches, a prominent edge where sandstones of Namurian age outcrop. The sandstones are coarse, gritty in parts, and show well developed cross-bedding. They contain quartz, feldspar and mica with organic matter, and are waterlain in a deltaic environment close to the land. Palaeocurrent directions from cross-bedding give a southerly source in St. George's Land. Near the scarp crest are well developed channel-fill sandstones representing the delta top. Here the sandstones are coarser (Roaches Grit) and have a higher feldspar content (arkose). The outcrop is wind-etched and so was our party after several minutes in a wind coming directly from Siberia. However the view showed an excellent example of the effect of geology on the landscape, with the two noses of the Goyt syncline formed by these two sandstone units being clearly visible.

After some discussion about the sanity of a local hermit, the party moved north to the axial region of the Goyt syncline to examine the *Gastrioceras subcrenatum* marine band, which outcrops in the bed of a stream. There black fossiliferous shales contain nodular horizons with sideritic nodules, formed in a delta swamp with stagnant reducing conditions allowing carbonate to collect around fossils within the shale.

The view of the area from the Mermaid would have been excellent but for the

cloud base 200 metres below us. The afternoon was spent in the very scenic area of the Benifold valley, stopping first at Ecton. There an unusual Pleistocene sand deposit cemented by calcrete is exposed by the roadside. Evidence of the copper mineralisation was found, with chalcopyrite and bornite fragments in a spoil heap.

The origin of the now worked-out ore body is problematic and is not related to the granite. Hyper-saline fluids from the evaporites to the east moving through the rocks are the probable cause. Concentration of the ore at Ecton occurred due to the anticlinal structures in the area.

The final stop was at Waterstones in the disused Browndge quarry. This is situated at the southern limit of the limestone in the Peak District. Unusually the limestone is vertically bedded due to a monoclinial fold. This area is sandwiched between two rigid blocks, resulting in this monocline. The Tournaisian and Visean limestones are richly fossiliferous corals, crinoids (some with a well preserved calyx) and clear burrowed horizons, reef knolls and even trilobites.

Many thanks to Don Steward and his assistant for an interesting day despite the weather, and to those who ventured out in it.

Andrew Rigby:

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"The Himalayas." Talk by Neil Howard. May 13th, 1985:  
Mr. Howard is an archaeologist who has travelled extensively in the Himalayas. He also has an interest in geology. The area is poorly documented historically, and the obscure monastery documents are not usually visible to western eyes. Mr. Howard was looking at the fortifications of the area and saw and photographed much geology in the process. He started his talk by giving an outline of the layout of the

mountains. The Himalayan ranges run from Afghanistan in a straight and narrow line for about 1500 miles SSE to Bangladesh. To the south lie the great plains of the Indus and Ganges. Mr. Howard illustrated his talk by a profusion of slides, the first few showing how abruptly the first hills rise from the plains. From the edge of the plains to the highest peaks is a distance of about 100 miles at the western end about 150 miles in eastern Nepal.

The hills are ranged in series, the most southerly being the Siwaliks, behind which run broad valleys, north of which lie the "First" range of the Himalayas proper, followed by the "Middle" hills in whose ranges lie large basins such as Kashmir and Katmandu. North of the middle hills lies the range of "Great Himalayas", the highest peaks in the world. The most westerly end of this range is a single line of peaks, but as it progresses easterly it becomes multiple, having as many as four ranges of mountains. Behind these "Great" peaks lies the Tibetan plateau. Unbelievable as it may seem, there are rivers which rise in the Tibetan plateau and cut south through the range of highest peaks.

One of the first geological surprises was just how soft the rocks were in places, many strata being hard clays or soft shales. The effect in an area affected by monsoons and much melt water is amazing. On the south slopes of the hills, the result is very steep gradients, vertical in places. Where jungle cover has been removed soil erosion is devastating. In the basins, the climate can give subtropical vegetation, whilst on the north slopes and around the highest peaks, the arid climate allows almost no vegetation except where irrigated. The scenery is grand but desolate. One consolation is that the geology is literally laid bare. Some of the middle hill valleys have been glaciated and this gives an Alpine appearance. Some of the slides showed perfect textbook examples of glaciated features, looking almost too good to be true. The effect of monsoons is less in the northwest areas at high altitudes, so the climate is again arid. Travelling through the area gives dramatic

changes from jungle to total aridity merely by going over a pass or round a mountain. After this fascinating view of the place, Mr. Howard answered questions, giving interesting facts about the fortifications and the life of the people in this bleak area, and also the native accommodation he used, and such problems as total lack of fixed prices, roads or maps. But our abiding impression was this eye-opening view of rapid erosion on a scale we could hardly have guessed at, let alone imagined.

John Colledge:

Thank you, John. I am even more sorry to have had to miss this. The typewriter nearly took off!

Sheila.

Dudley Limestone Workings:  
Progress Report Eight:

Many projects are now reaching a critical stage, and in the next few weeks the results of investigations into workings near Birmingham Road and Tipton Road are expected. Decisions are expected about the funding and timing of investigations at the Black Country Museum and the flanks of Wrens Nest Hill. A decision is imminent on the treatment options for the gallery on the east side of Broadway, near the Technical College -either infilling now or interim safety inspections and infilling in due course. Tenders for further investigations in the Guest Hospital area are now being invited, and safety inspections of the caverns on the east side of Dudley Zoo have now commenced. Meanwhile the trial infilling scheme at the Dudley Sports Centre is progressing, and in due course will be the subject of important reports on the findings of the various research studies being carried out. Underlying the timing and progress of the schemes is the fundamental

question of the levels of Derelict Land Grants that will be forthcoming from central government in future years.

Alan J. R. Evans:

Cotwall End Geological Trail:

As you may be aware, a recent examination of rocks at Cotwall End Valley has brought to light a series of very interesting and long neglected exposures. Rocks exposed in the valley range from fossiliferous Aymestry Limestone (Silurian) to Enville Beds (Permo-Carboniferous), and a number of structural features, folding and particularly the effects of faulting (Western Boundary Fault of the South Staffs. Coalfield runs down the valley) are seen here.

The Silurian Shales and Limestones of Turner's Hill are stratigraphically younger than those of Wrens Nest and Castle Hill. Clearly such a variety of geological features makes the preparation of a geological trail around the area a very worthwhile project and is of considerable educational value.

So if you have free time on a Sunday and fancy rolling up your sleeves and wielding a spade or a pair of clippers in very pleasant surroundings, or if you just fancy some fresh air and want to work up an appetite for your Sunday lunch, why not come along and "muck in" with us? Dates:-

- 20th October.
- 3rd November.
- 10th November.
- 24th November.

If these dates do not coincide with your free time please ring me on Dudley 213207 and we'll arrange something as I shall be available most Sunday's until Christmas. Cheers.

Graham Wharton:

Geological Courses:

- 1. University of Bristol,

Dept. of Extramural Studies,  
Villa Memorial Building,  
Lion's Road,  
Bristol BS3 1HR.

a) The Polarising Microscope:  
An introduction. Non-res. week  
end course. Nov. 30-Dec. 1.  
10am-5pm each day. £10.40.  
(This course and the tutor,  
Dr. R. Bradshaw, are thoroughly  
recommended by members of RCGS,  
and not just because Dr.  
Bradshaw will visit us in  
December!). B85 H011 SJ.

b) Geology of West Dorset and East  
Devon Coast: D85 G002 SJ  
Non-res. Weekend course.  
Nov. 1-3. Mostly in the field.  
£12.25.

c) Tenerife. Field week Jan. 10-17.  
Approx. £300. Apply quickly.

2. University of Birmingham,  
Dept. of Extramural Studies,  
P.O. Box 363,  
Birmingham B15 2TT.

a) Introduction to Invertebrate  
Fossils:  
Dr. G. M. Bennison. 20 meetings  
from 1st Oct. Tues. 7.30 p.m.  
£20.00. At University. SPG/1.

b) Geology - a basic course:  
Dr. C.H.S. Sands. 20 meetings  
from Thur. 3rd Oct. at  
University. £20.00. SPG/2.

3. University of Warwick,  
Coventry CV4 7AL.  
Tel:24011 ext. 2831.

Geology & the British Landscape:  
At Stratford-upon-Avon. 20  
meetings, Wed. Oct. 2nd 7.30.

4. Cadbury College Centre,  
Dowland Close, Redditch Rd.,  
Kings Norton, Birm. B38.

O-level geology, evening class:

Iceland Geological Holidays:  
Twickenham Travel, 84 Hampton Rd.,  
Twickenham TU2 5QS.  
Special interest trips, 1986.

Always be a Member:

Family: Fleckner and Rosalind  
Fletcher, Gillingham.

Group: Halesowen College,  
Mr. Alan Richardson,  
Geology Department.

Catalogues Received:

Antiquarian and out of print books,  
maps, geological.  
Details from Paul Shilston.

Natural History Book Service.  
62 Tritton Road, London SE1 8DE.  
01-761-5969.

Sites of Special Scientific Interest:

The Nature Conservancy Council have  
reviewed the Midlands Coalfields, and  
propose to schedule the following sites  
as SSSI's:-

1. Erewin's Bridge canal cutting,  
Netherton.
2. Doulton's Claypit, Netherton.
3. Ketley Quarry, Kingswinford.
4. Bromsgrove Rd. cutting, Halesowen.
5. Webster's Claypit, Coventry.
6. Dowles Brook, Bewdley.
7. Alveley Grindstone Quarry, near  
Bewdley.
8. Eyemore Railway cutting, Severn  
Valley Railway.

Further sites being considered are  
Illey Brook and Gospel End road  
cutting.

Before starting their review, the  
NCC consulted the site records  
prepared by RCGS.

Field Secretary: Nigel Bradley,  
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Hon. Secretary: Paul Shilston,  
021-459-3603.

Editor: Sheila Pitts,  
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Glos. GL20 8RG.

John Easter. 27-4916.

## GEOLOGICAL CURATORS GROUP

The Dudley Experience and Annual General Meeting

Banqueting Suite, Dudley Town Hall, St. James's  
Road, Dudley, West Midlands

Friday 6th December 1985  
(with optional field trip 7th December)

The formulation of a collections policy is seen as one of the main issues to which the Group must address itself without delay (The Next Ten Years - Geological Curator Vol 4 No 1)

The meeting at Dudley coincides with the ending of the two year MSC funded Palaeontology Project at Dudley Museum. Much useful and sound work has been accomplished but the long term future of the collection is still in doubt and there remains little or no prospects for the appointment of a permanent geological curator.

Using the Dudley experience by way of illustration it is hoped that the main session will yield constructive and objective comment not only to help Dudley in its search for a solution but to aid the Group in formulating its own plan of action

### Programme

- |       |   |                                  |
|-------|---|----------------------------------|
| 10.30 | Coffee  |                                  |
| 11.00 | Welcome   | The Mayor of Dudley              |
| 11.05 | Introduction  | A Cutler, B.C.G.S.               |
| 11.10 | History of Geology in Dudley and Staffordshire  | Dr H S Torrens, Keele University |
| 11.40 | The Dudley and Midland Geological Societies   | A Cutler, B.C.G.S.               |
| 12.00 | Dudley Palaeontology Project  | Miss J Round, Dudley Museum      |
| 12.20 | Tour of Dudley Museum and Geological Collections  |                                  |
| 13.00 | Buffet Lunch provided by Dudley M.B.C. in the Banqueting Suite  |                                  |
| 14.00 | Collections Workshop: Chairman P S Doughty<br>with contributions from<br>P S Doughty - Chairman Geological Curators Group<br>H P Barnes - Director of Leisure Services<br>Dudley Metropolitan Borough Council<br>D Downe - Director West Midlands Area Museum Service |                                  |
| 15.30 | Tea   |                                  |
| 15.45 | 12th Annual General Meeting   |                                  |

B.C.G.S. CHRISTMAS CARDS

Three designs are available, each depicting a black & white illustration together with descriptive notes and greeting. Cards are approximately 8" x 6" printed on top-quality board.

Ref. B British Association visit to Dudley Caverns  
1849 - Murchison's address

Ref. C British Association visit to Thick Coal Openworks  
1849 - contemporary print.

The price for a dozen cards including envelopes is £2=50.

Mixed dozens may also be obtained at the same price, but must be restricted to 6 each of two designs or 4 each of three designs.

Single cards may be purchased at 25pence each.

Discounts available for quantities of 60 or more; details on request.

The cards will be available at society meetings from September or by post from Alan Cutler, 21 Primrose Hill, Wordsley, Stourbridge, West Midlands.  
Telephone: Brierley Hill 77865.

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B.C.G.S. CHRISTMAS CARDS

Order Form

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..... dozen cards, ref. ....  
..... dozen cards, ref. ....

For mixed dozens, state required designs.

Name

Address

Cheque enclosed for £..... Please add 50p towards postage  
(Payable to B.C.G.S.)