The Black Country Geological Society

NEWSLETTER No. 54 - December, 1985:

Editorial:

In December we welcome Dr. Reg Bradshaw from Bristol University. He has been a tutor and friend to several of our members for some years. His courses have ranged from crystallography and petrology weekends at the University and at Devizes in Wiltshire, to the beautiful landscapes of the west of Ireland and north Wales. He has a gift for making members of a course into a happy group where lasting friendships are made. Our last speaker, Margaret Oliver, was one of his undergraduate students.
It will be very pleasant if this talk by Dr. Bradshaw cements further the connections between Bristol and B.C.G.S., and leads to more meetings in Bristol and Dudley.

Forthcoming meetings to Newsletter No. 55 (see page 2 for details):-

6/7th Dec., Friday/Saturday: Geological Curators' Group meeting "The Dudley Experience."

Mon. 9th Dec., "The Eye of Faith in Geology." Dr. R. Bradshaw.

Mon. Jan. 13th: "Precambrian Fossils" - talk by Dr. Trevor Ford.

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

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.

Programme 1985/6:

6/7th Dec., Friday/Saturday:
Geological Curators' Group meeting. "The Dudley Experience" and A.G.M.
This meeting was arranged to coincide with the GCGS tenth anniversary year, and members are welcome to attend this event hosted by the society under the auspices of Dudley Museum.
Please register in advance using the enclosed form, or telephone Alan Cutler. (0384-77865)
An optional field trip to Wrens Nest and/or Doulton's Claypit will be helf on the Saturday. See the separate sheet for details.

9th Dec., Monday:
"The Eye of Faith in Geology"
Talk by Dr. Reg Bradshaw, who is senior Lecturer in Geology at Bristol University. His principal interests lie with the hard rocks, metamorphic and structural geology and crystallography, although he is also interested in the history of geology. In this lecture he examines the all too frequent trait (of which no doubt we are all guilty) of "seeing what we expect to see", and how such preconceived notions are difficult to dislodge, as in the case of the Piltdown Man hoax.

13th Jan., Monday:
"Precambrian Fossils,", talk by Dr. Trevor Ford of Leicester University.
Precambrian fossils are the subject of much research around the world, with more and more species being recognised, and which may yield light on the perplexing problem of the apparent sudden burst of life in the Cambrian period.
Dr. Ford, who is Senior Lecturer in geology at Leicester University, has a wide range of interests including micropalaeontology, geological aspects of speliology, and the Precambrian of Charnwood.

24th Feb., Monday:
"Geology of Kenya," talk by Mr. W. G. Hardie.
Bill Hardie has now retired from being Senior Lecturer in geology at Birmingham University. His special interests include petrology and volcanic studies. Members will remember his exciting account of the G.A. trip to western U.S.A. and can look forward to another absorbing evening with this account of the G.A. visit to Kenya.

17th March, Monday:
A.G.M. and the B.P. film "The Earth, our Inheritance."

20th April, Sunday:
Field trip to the Shelve district of Shropshire. Leader Mr. Stuart McNicol.

12th May, Monday:
"Aspects of Trilobite Geology," talk by Dr. A. Thomas of Aston University.

15th June, Sunday:
Field trip to the Potteries, North Staffordshire. Leader Dr. L. Boardman.

June/July (date to be arranged)
Weekend field trip to Llangollen, with Birmingham University extramural Dept. Accommodation in hotel.

Weekend field trip to Lake District July 6th and 7th, 1985:
Dr. Frank Moseley led this trip organised by the Extramural Dept. of Birmingham University at the request of the Society. Ten members attended.
Dr. Moseley outlined with clarity and great selectivity the geology of the region at a briefing before the trip. On Saturday morning we assembled at Goo Tarn, Coniston. All day we followed roughly the strike of the rocks close to the Ordovician-Silurian junction. The influence of geology on scenery is marked. The Stockgill Shales are

are among the weakest rocks and get thinned or sheared out. They form the low lying hollow which is Boo Tarn. Above them the Browgill Beds can be traced as a ridge. Beyond, the Brathay Flags form another strike valley, and to the south east the Coniston Grit outcrops giving rise to further hills.
We studied the variation in the Coniston Limestone which overlies the Borrowdale Volcanics. The lowest division, the Longsleddale Beds, look remarkably like the volcanics, and were mapped as such until fossils were found in them. Now they are interpreted as volcanic sand.
The Applethwaite Beds form a conspicuous division as a result of the weathering out of calcareous nodules. Elsewhere were exposed mudstone beds, the white limestone, and a rhyolitic horizon.
The Borrowdale Volcanics are a result of island arc activity. We saw spectacular columnar jointing in ignimbrites and water-laid tuffs. The absence of fossils in the latter may point to a fresh water environment.
In Bannisdale Quarry we saw the banded mudstones of the Brathay Flags, distal turbidites. We finished by looking at the famous Ashgill section. The Skelgill beds contain graptolites, but as the lowest graptolite horizon is missing, the Ordovician-Silurian junction is unconformable.
Dr. Moseley demonstrated the many places where faulting can be inferred by the displacement of outstanding landscape features. He emphasised the accuracy with which the geology can be mapped using air photographs as a base, and the need for great care in distinguishing between bedding, cleavage and jointing in mapping some of these rocks.
On Sunday we visited Ullswater starting from Aira Force and climbing Gowbarrow Fell. We spent most of the day walking over the lower divisions of the Borrowdale Volcanics, mostly andesitic lavas and tuffs. The underlying Skiddaw Slates are weak and form the low lying ground around Ullswater, and the effect of faulting displaces their outcrops and the distribution of lowlands. Aira Force itself probably originated at the junction of the volcanics and Skiddaw Slates, but has worked its way back through the andesites. At Aira Crag we saw how successive lava flows produce a terraced relief and overlooking Matterdale we examined a flow breccia.
On Little Mell Fell we saw a Devonian conglomerate containing rounded Silurian Pebbles. At the time of their deposition the volcanics must have been covered with younger rocks. We saw a dyke through the Devonian.
At the close of the day we saw evidence that the junction between the Borrowdale Volcanics and the Silurian Slates is a thrust fault.
Dr. Moseley enabled us to appreciate the influence of geology on some spectacular scenery, enjoyed in bright sunshine, and we are most grateful.

Kate Ashcroft:

Vive les Mineraux!

Given the choice, a keen geologist would not decide to spend his holiday in Paris. It was with some reluctance, therefore, that I agreed to accompany my husband to Paris last June. My doubts receded only slightly when he produced a Michelin Guide opened at the page describing the mineral collection of the University of Paris. I was promised that we would try and see this collection.
The first couple of days were taken up with the organised tours to various chateaux which I have to confess, I enjoyed. My heart sank however when George announced that it would take a whole day to "do" the Louvre. Our free time was becoming rapidly less. In return for agreeing to visit the Louvre without moaning or looking thoroughly morose all day, I extracted a promise that we would visit the University of Paris on Wednesday.

We found the University without difficulty. It is a horrible modern concrete maze. Ugly, dirty and unkempt are a few adjectives which suit it perfectly. The geological department is guarded by a heavy steel door and is located in the basement which is, if anything, more dirty and unkempt that the rest of the campus. On entering the museum our gasps of amazement were clearly audible. It consists of a single room containing glass cabinets on plinths. Each cabinet is lit by spotlights. The cabinets contain hundreds of crystal groups which can only be described as fabulous. There is no other lighting so the effect is of hundreds of crystals floating in space. All the mineral groups are represented by priceless specimens from all over the world. Those of you who know George will remember that he is colour blind and is not usually impressed by "rocks". The quality of the display was sufficient to make him scurry from case to case. Every specimen was magnificent and George (to use how own words) became "ridiculously patriotic." He was chuffed to bits every time a specimen was "one of ours." The British specimens were nearly all from Cornwall or Cumberland. We were both disappointed to note the Blue John was not represented. The success of this outing meant that my suggestion that we visit the Ecole des Mines de Paris was taken up with enthusiasm. The building is much older than the University and still shows some damaged stonework dating from the Second World War. The staircase leading to the museum is decorated with wall paintings depicting interesting geological sites. The museum itself is conventional in design. The specimens are not spectacular but are typical of the type of specimen an amateur is likely to find. The various habits of each mineral were displayed together. The museum also contains large geological maps of each region of France. For a brief period I actually understood the geological structure of the Dordogne. It is extremely complicated and unfortunately geological maps are not sold at the museum. There is also a small case containing rare specimens which have been named after their discoverers, most of whom have connections with the Mining School.
I can highly recommend both these collections. The University collection is breath-taking. The Mining School collection should be seen by everyone thinking of studying any part of France's varied geology. I fulfilled my part of the bargain and visited the Louvre without complaint. The Venus de Milo is the most uninteresting piece of rock I have ever seen!

Anne Harrison:

Shropshire Geological Society:
Shropshire Observed:

On Sunday 14th July, 1985 the 150th anniversary of the founding of the Shropshire and North Wales Natural History Society was celebrated. A morning of talks anf an afternoon of walks was organised to recreate the Victorian spirit of enquiry in the environment.
About seventy people attended the morning talks where the early 19th century industrial, scientific and social scene was set by Dr. Barrie Trinder of the Ironbridge Gorge Museum Trust. The Society was established on 26th June 1835 and the first donation on that day was eight specimens of minerals and fossils from Thomas du Gard. A large collection was rapidly amassed and the Society rented the building which is now the Borough rates office in Dogpole as a museum. In 1836 a Mr. Gilbert was appointed curator and given accommodation in the building. Unfortunately Gilbert resigned within a year due to the consternation caused by his wife joining him in Shrewsbury. Gilbert emigrated to Australia where he made a very important contribution to natural history. Between 1835 and 1845 several plans for a new building were

proposed but were never built as sufficient funds were not available. The museum remained a private one until the early 1880's when the Society formed a joint committee with the Borough and a public museum opened in the Old School in Castle Gates in 1885, one hundred years ago. These early events in the history of the Society were outlined by Dr. Hugh Torrens of Keele University.

James Lawson, librarian to Shrewsbury School, went on to describe how the Society developed from 1887 to 1985. The Society changed its name several times and in 1887 it was known as the Shropshire Archaeological and Natural History Society. Interest in natural history was waning and being replaced by more enthusiasm for archaeology. By the 1940's the natural history responsibilities had been dropped from the constitution and the Society is now called the Shropshire Archaeological Society with James Lawson as the present chairman. The final speaker was Bruce Bennison of Rowley's House Museum, who summarised the development of the museums in Shrewsbury. From the first private one in Dogpole, to the joint Society and Borough one in the Old School and now the Borough Museums including Rowley's House and Clive House. He pointed out that Gilbert, the first paid curator appointed in 1836 was never replaced except by honorary curators. The next paid curator was appointed in the 1970's, a gap of about 130 years and today there is no natural historian on the staff despite the very important botanical, zoological and geological collections.

In the afternoon about 120 people joined the organised walks based at Grinshill. Six leaders took groups off to look at the geology and quarrying, or the botany, local history, mining or landscape of the area. It was a very enjoyable and instructive afternoon which ended up with cream scones at the Elephant and Castle in Grinshill.

Diana M. Smith,
c/o Flat 4,
16 Canonbury,
Shrewsbury.

Publications:

The Sarjeant Collection, North Midland Minerals:- by Angela Edgar. This has been produced in co-operation between the City Museum at Hanley, Stoke-on-Trent, and the Data Preparation Project. It is available at the Museum shop at £1.95p. Contact Mr. Don Steward on 0782-273173.

Geology Publications by University College, Cardiff, 38 Park Place, CF1 3BB.
Various field guides, priced about £2. Includes:-
Corsica, Iceland, Norway, Colorado, Utah, Taf valleys, Glamorgan coast and building stones.

Geology of Non-metallics.
Metal Bulletin Books Ltd.
PO Box 28E Worcester Park,
Surrey KT4 7HX.

E. J. Brill of Leiden and Academic Press of 24 Oval Rd., London NW1 7DX (petroleum geology and geochemistry) have very interesting catalogues for those who would consider spending about £50 per book. This also applies to Metal Bulletin Books.

Geology Courses and Holidays:

Geology of the Lleyn Peninsula, North Wales: Feb. 7-10th, 1986. Dr. Paul Selden, Dept of Extramural Studies, Manchester M13 9PL. About £75.00. (P.S. I have been on Dr. Selden's trips to Devon and Anglesey and thoroughly enjoyed them - Sheila.)

Bristol University Dept. of Extramural Studies, Queens Rd., BS8 1HR.

a) Pembrokeshire: Late Precambrian and Lower Palaeozoic of N. Dyfed. Long weekend 7-9th March. £15.00. C85 G001 SJ.

b) Isle of Purbeck: Long weekend. 28th Feb-2nd March. £12.25. D85 G001 SJ.

c) Cretaceous of South East England: Long weekend in Spring Bank Holiday. Details on request.

d) Brittany-Normandy: 3-4 day course in late March.

e) Iceland: Two weeks in August.

f) Hebrides: Island hopping up to the far north west. June.

Details of the last three, contact the department.

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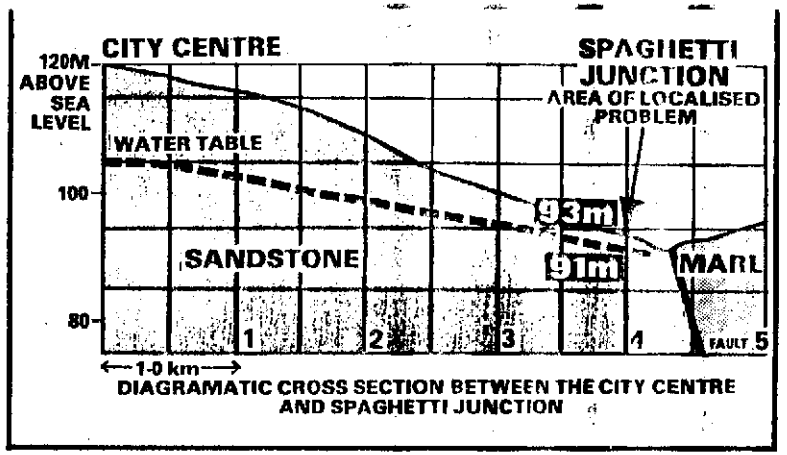

This illustration reveals how the water table's rising level has brought it ever closer to the surface.

GROWING CONCERN AS UNDERGROUND RESERVOIRS CONTINUE TO RISE

Birmingham has a bad case of rising damp. The water table beneath the city is rising remorselessly by ten inches a year, flooding basements and threatening the foundations of buildings.

Pumps at British Telecom's underground exchange in the city centre are having to cope with a "quite dramatic" increase in flood water.

The problem — labelled a "time bomb" by experts — is potentially so serious that worried Department of the Environment engineers have called in the Construction Industry Research and Information Association to investigate water tables under industrial cities.

The association will examine Birmingham's problem once it has completed its study of London, where the level is rising by three feet a year and the threat is greatest because of the number of deep buildings.

No thought

With the water table artificially depressed by industrial extraction, buildings with deep basements and cellars were constructed in the big cities with no thought for the water level. The problem is not confined to Britain but has been noticed in Germany, France and New York.

CIRIA hopes to produce reports telling engineers how to control the problem by local or regional pumping and how best to modify buildings to meet the danger.

The level of Birmingham's "underground reservoir" has been going up since the mid-1970s. According to the Severn Trent Water Authority's principal groundwater engineer, Dr. Andrew Skinner, it is the result of firms switching from boreholes to mains supply, factory and brewery closures, new engineering processes requiring less water and factories and homes moving out of the city.

Though the Birmingham average is ten inches, it is worse in parts — the water authority hydrograph on Constitution Hill has recorded a 29 inch per year increase over the past 11 years.

Near surface

The level is far beneath areas of high ground, being 50 to 60 feet below Edgbaston and parts of the city centre.

But it is very near the surface of areas of low ground, principally those in the River Tame valley, which runs from the Black Country through the northern part of the centre to Perry Barr and Aston.

Aston and Witton suffer most, the water being only six to ten feet below the surface. Some local firms have been affected for years. IMI were first flooded nearly ten years ago.

Damage in the region has been comparatively minor so far, with flooding in basements and cellars. But experts are concerned that deep foundations, tunnels and basements face the dangers of severe flooding, ground swelling, water - borne chemical attack and even reduced capacity to bear the weight of buildings.

What also worries them is that Birmingham's water will stop rising only when it reaches its natural level. But, because no records were kept, the water authority has no idea what that level is. "So we don't know how bad it will get."

Major worry

The rising water had to be taken into account by West Midlands County Council when planning the rapid transit system's underground section. Their consultants' advice was that it would not be a major problem. But it will be monitored regularly.

Severn Trent says it would be uneconomical to draw off the rising water for drinking because its volume is tiny compared to the hundreds of millions of gallons it supplies to Birmingham.

Gives advice

Contrary to public belief — including critical Birmingham Council leader Dick Knowles — the water authority is not responsible for tackling the problem. The city council is. Severn Trent merely monitors it and gives advice. Assistant city engineer Neil Dancer will be one of the CIRIA investigators. "If Birmingham's water carries on rising," he said, "it could be serious."

One important question remains unanswered: who will pay for the flood damage — industry and the householder or the council?

THOMAS QUIRKE

B. C. G. S. CHRISTMAS CARDS

Two 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

Single cards may be purchased at 25 pence 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

B. C. G. S. CHRISTMAS CARDS

Order Form

Please send me..... dozen cards, ref. .....

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

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

For mixed dozens, state required designs

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Address

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

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 Deputy 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 with contributions from P S Doughty - Chairman Geological Curators Group H P Barnes - Chief Officer Leisure Services Dudley Metropolitan Borough Council D Downe -Director West Midlands Area Museum Service	
15.30	Tea	
15.45	12th Annual General Meeting	

The Dudley Experience/12th Annual General Meeting

I/We will be attending the G.C.G. meeting in Dudley on 6th December 1985

Name:

Address:

If you require details of accommodation in Dudley please tick ☐

If you are interested in attending the optional field meeting on Saturday 7th December 1985 please tick ☐
Wrens Nest NNR and/or Saltwells LNR

Please return completed form to A.Cutler, 21 Primrose Hill, Wordsley, Stourbridge,West Midlands DY8 5AG