The Black Country Geological Society

NEWSLETTER NO. 99 JUNE 1993

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.

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 to use it when you feel it is necessary, also when a site owner makes it a condition of entry.

FUTURE PROGRAMME

FRIDAY 11TH - SUNDAY 13TH JUNE. Birmingham University School of Continuing Studies weekend field meeting to Castleton, Derbyshire.
Leader: Dr. Derek Gobbett.

This weekend will study "tropical reefs and deltas" of the Carboniferous period. One day will be spent on the Carboniferous Limestone (limestone shoals and reefs, with the added interest of some volcanicity). The other day will be on the deltaic deposits of the Millstone Grit, which now outcrop as spectacular gritstone edges.

Accommodation at Peak National Park Centre, Losehill Hall, Castleton, Derbyshire. Cost (tuition and full board) £129.

This is NOT a BCGS event, but is organised by Birmingham University, School of Continuing Studies. It is led by Dr. Derek Gobbett, who is a Society member.

Details and bookings:
The Enrolment Secretary,
Residential Courses and Study Tours
School of Continuing Studies
University of Birmingham
Edgbaston
Birmingham B15 2TT
'phone: (021) 414 5605.

MONDAY 14TH JUNE. Lecture: "The Grand Canyon" by Dr. Trevor Ford of Leicester University.

Dr. Trevor Ford lectured to the Society last October on 'Blue John' and now his subject will be one of his other special interests - the Grand Canyon. Dr. Ford has made several visits to the Grand Canyon and has led a number of white-water rafting trips down the Colorado River through the Grand Canyon - so we will see the canyon from above and below!

SUNDAY 27TH JUNE. Field meeting to Clee Hills. Leader: David Gossage.

Joint meeting with Shropshire Geological Society.

Meet 10.30 a.m. in the car parking area opposite the Victoria pub, Clee Hill village (grid ref: 595758, OS Landranger maps 137 and 138). The parking area is on the south side of the A4117 Bewdley-Ludlow road, just on the Ludlow side of the cattle grid.

David Gossage writes: The Clee Hills are made up of some 1100 metres of sedimentary rocks of the Old Red Sandstone, topped by thin representatives of marine Carboniferous rocks and Coal Measures with intrusive dolerites. We shall examine landforms and exposures of rocks typifying this part of the stratigraphic sequence (age 310-420 M years) in south Shropshire.

David Gossage, who is a Society member, graduated in geology at Birmingham University. He spent 32 years as a geologist with Shell International including 2 years in London, 10 years in Holland and the rest in the Middle East, North and West Africa.

SUNDAY 11TH JULY. Field meeting to Bardon Hill Quarry, Coalville, Leicestershire and Charnwood Forest.
Leader: Dr. Frank Ince (The Russell Society).

Meet 10.30 a.m. at the Quarry car park (grid ref: 446128). The quarry is at Bardon on the A50 Ashby-de-la-Zouch to Leicester road, about 6 miles south-east of Ashby.

All visitors must have hard hats (see note about hard hats elsewhere in this newsletter) and will be expected to sign an indemnity form.

The quarrying operations at Bardon Hill expose late Pre-Cambrian volcanic and igneous rocks which have been subjected to tectonic activity producing shatter belts, thrusts and faults. The Pre-Cambrian sequence is separated by a marked unconformity from the Mercia Mudstones of Triassic age and at this junction there is a range of copper minerals.

After visiting the quarry Dr. Ince will lead the party to several sites in Charnwood Forest which has many classic exposures of Pre-Cambrian rocks as well as excellent viewpoints for studying the surrounding Midlands geology

SATURDAY 17TH - SATURDAY 24TH JULY. International Conference on Geological and Landscape Conservation at Malvern.
The conference will offer lectures, discussion and poster sessions, and exhibitions by sponsors. Also a wide choice of field trips in England and Wales is planned.

Details from: Margaret Phillips, The Company, St. Johns Innovation Centre, Cowley Road, Cambridge CB4 4WS. 'phone: 0223 421124.

29TH AUGUST - 3RD SEPTEMBER. British Association for the Advancement of Science.
1993 annual meeting entitled "SCIENCE FOR LIFE '93". To be held at Keele University. Details from: Sue Bramley, Science for Life '93 Office,
The Darwin Building
Keele University, Staffs.
ST5 5BG. Tel: 0782 583373.

See the EARTH SCIENCES ACTIVITIES sheet with this newsletter.

SUNDAY 26TH SEPTEMBER
Field meeting to quarries at Bedworth and Nuneaton visiting Griff Quarry near Bedworth in the morning and Judkin's Quarry near Nuneaton in the afternoon.

Leader: John Crossling (Warwickshire Museum).

Meet at 10.15 a.m. at the entrance to Griff Quarry (grid ref: 361890). This is about 1.5 miles north of Bedworth. Leave M6 motorway at junction 3 then go north on the A444, towards Nuneaton, for about 2.5 miles to a roundabout. Here take the A4113 going south towards Bedworth, after 50 yards take the left turning (Gipsy Lane) and go along it for a quarter of a mile. The quarry entrance is on the right and there is a small car park to the right as you drive into the site.

The Nuneaton area has important exposures of Pre-Cambrian and Cambrian strata, and they are particularly well displayed in these working quarries. It is difficult nowadays to obtain access to working quarries so we are particularly grateful to John Crossling for arranging these visits..

Hard hats are required for this meeting.

MONDAY 11TH OCTOBER. Lecture on mining exploration by John Collier (RTZ Mining and Exploration Ltd.)

SATURDAY 30TH OCTOBER.
A geological and social event of an afternoon canal trip through the newly opened Dudley canal (duration approx. 2 hours) followed by an optional meal.

Assemble at 2.15 p.m. at Mad O'Rourkes, Hurst Lane, Tipton (near the Black Country Museum) and leave cars there. Go by private bus to the far end of the tunnel at Netherton, travel by barge through the tunnel into Singing Cavern and Little Tess Cavern with their audio-visual displays, past the Black Country Museum site and finish at Mad O'Rourkes around 4.45 pm. A meal will be laid on there for those who want it and have booked in advance.

A booking form for the canal trip and meal is given in this newsletter and will be repeated in the August newsletter.

MONDAY 15TH NOVEMBER. Lecture "Silurian geology from the Pentlands to Pembroke" by Dr. Derek Siviter (University Museum, Oxford).

SATURDAY 27TH NOVEMBER. Geological Roadshow at Dudley Museum.

MONDAY 6TH DECEMBER. Lecture by David Brown (British Waterways).

MONDAY 17TH JANUARY 1994. Lecture "Black Country Building Stones" by Keith Hodgkiss.

MONDAY 21ST FEBRUARY, AGM followed by a talk "The Himalayas" by David Gossage.

EDITORIAL

In pusuit of my argument that Geology is important and a determinant of more than we are generally aware, I've been considering the impact of Geology on bird life. Where strong rocks outcrop at the coast and are eroded to produce cliffs and ledges one may find spectacular breeding colonies of guillemots, razorbills, gulls and fulmars as on the St. Bees sandstone, the chalk of

Flamborough Head, the Torridonian sandstone of Handa or the dolerite of the Farne Islands. Sand martins and kingfishers in contrast need soft sand in which to burrow while house martins require soft mud.

Excavated gravel terraces provide a superb habitat for ducks and wildfowl as at Kingsbury Water Park. Highly permeable sands of the Brecklands or the Triassic sandstones and pebble beds of Sutton Park or Cannock Chase lead to the heathland habitats of stonechats, whinchats, pipits and yellowhammers. Geology in the making provides estuarine sands for the probing bills of curlew, oyster catchers, redshank and dunlin while turnstones plunder the shingle. The link between birds and rocks can be so strong that many birds have developed petrologically determined camouflaged plumages. (Try searching for turnstones in shingle or ringed plovers eggs on a sandy beach). Convinced? But I'm still searching for the geological explanation for the nuthatch on the Shilston's bird table!

REPORTS

The Falkland Islands - An illustrated talk by Sheila Pitts 22nd February.

This talk was the story of a 16 day natural history tour of the Falkland Islands in the late summer of February 1992. It was a tour alone because the travel agents, having had the booking for a year, asked me, two weeks before departure, whether I would like to change the dates because no one else had booked. It was of course far too late to rearrange work but resulted in far more freedom for me.

The talk began with the geological setting, maps showing the islands and the nearby South American mainland. The coasts are mostly either low cliffs of near horizontal strata, or white sandy beaches. Inland the country is divided into "soft camp" or "hard camp" and soft camp is where vehicles get bogged. There are no trees and many cushion plants because of the wind. Weather is very like Britain, but with more wind, and calm sunny days are as beautiful as any in Scotland or Ireland. The air is so clear that sunburn is more of a problem when the temperature is in the 70's. High tussoc grass near the coasts make a silent, wind free world for smaller birds. Some seaweed beds are large enough to map, as are the famous stone runs. These quartzite boulders look like rivers which have stopped moving down hillsides from the ridges exposed jaggedly above. They are probably periglacial but the islands were not glaciated in the Pleistocene.

Travel is by Islander aircraft or four wheel drive vehicles across country. Being "bogged" in a Land Rover seems to be a local initiation rite. It happened to me on my first day and from then on local friendliness was complete.

There were inevitable reminders of war, ten years on. Areas which contain mines are wired off, including a beautiful sandy beach near Port Stanley. Most of the wildlife is not heavy enough to detonate explosives.

I stayed in wildlife lodges with en-suite facilities and local guides to drive me to and from coasts and lakes. Elephant seals were moulting and snorting near one lodge, looking like outsize fat sardines with big noses. Little tussoc birds perched on them looking for much smaller wildlife.

Most days I walked along coasts, and at packed lunch time sat with penguins. Lunch wasn't fishy enough for them but I loved their company. There were large colonies of cheeky red-eyed Rockhoppers, sometimes sharing with cormorants, Gentoos with their white headphones, shy Magellans and the regal, golden waist-high Kings.

It is easy to see why the islanders love their islands and know so much about wildlife. Falkland or English couples work all the daylight hours running a lodge, growing the food, cooking meals including the bread, cutting peat - and being interrupted to drive across an island and chase sheep whenever a plane lands on a grass strip.

I have a dream that these islands and their wildlife should be taken out of politics and become a world class national park. It wouldn't matter if a penguin ate an occasional United Nations blue beret.

SHIELA PITTS

Report on the visit to the Lapworth Museum, University of Birmingham
3rd March 1993.

Do we still produce those great eccentrics and polymaths who seemed to characterise, and at times dominate, that incredible Victorian period? Was their dedication and single-mindedness the product of an age which encouraged originality, when change had not reached the frenetic levels of today?

The pressures to conform, the rise of "organisation man", the "scientific" fitting of people into the pigeon hole allegedly best suited to their talents, and the emphasis on commercial values are just some of the influences which may be inimical to original minds today. Such thoughts were provoked by the sight of Professor Lapworth's memorabilia - his artifacts, his beautiful maps and diagrams, those photographs with his penetrating eyes, and above all the Lapworth Museum itself, now one of the five National Geology Collections in the U.K.

The curator, Dr. Paul Smith, outlined its development from Mason College in the 1880's when Lapworth was appointed to the first Chair in Geology, to the completion of the present building in 1913 (on land donated by the Cadbury family) as part of the University of Birmingham, and more recently the amalgamation with the Aston University collection.

How fascinating to hear that it was requisitioned during the First World War as an hospital. What contemporary of Rupert Brook or Wilfred Owen lay there, perhaps in mortal agony, staring at the ceiling which now looked down on our gathering of well fed prosperous folk. Perhaps the floor had run with blood! Just then an unfortunate slip precipitated one poor soul's skull against a chair mingling his blood with the ghostly blood of yesteryear. I hope he is now fully recovered.

As a Geographer with strong leanings to Meteorology and Climatology I am in the delightful position of being fascinated by Geology but relatively still on the edge and, therefore, able to enjoy it in a naive and uncluttered manner. This is my idiosyncratic list of those things which made an impact on me.

I stood open-mouthed at the sight of Sir Charles Holcroft's original display cases, one of which contained (by my count) 57 near perfect specimens of trilobites, including 10 perfect *Calymene blumenbachi*. I hate to think how long I have spent unsuccessfully searching for a decent trilobite in the Wren's Nest. Incidentally, Holcroft was another great Victorian character who propspered as an Iron Master in the Black Country and developed a penchant for collecting fossils particularly trilobites, many of which he purchased from one of the fossil dealers on Dudley, Woodall - a common Black Country name. Holcroft's original catalogue is preserved in the Museum.

How long does it take to count 250,000 specimens? Well, that's how many the Museum has - 50,000 being of very great importance. Some apparently belong to the Geological Survey of Canada "borrowed" by Lapworth over 100 years ago - they now want them back! How many of us were able to assuage out twinges of conscience over some hastily purloined specimen with this knowledge?

I am deeply impressed by the sheer intellectual effort involved in the study of rather colourless graptolites. To develop the idea of correlating geographically dispersed strata by identifying their fossil content as Lapworth did, required tremendous persistence and meticulousness.

Those ancient tribes of Albion enjoyed a new lease of life with the help of Sedgwick (Cambrian), Lapworth (Ordovician) and Murchison (Silurian). Lapworth had had the intellectual grasp to resolve the overlapping controversy between the other two by bringing in the Ordovices.

Many of you will recognise my frisson of delight when at last I saw specimens of a fossil which had for long eluded me. More than 35 years ago I had searched in vain for the "Delabole Butterfly" (a Spirifera brachiopod) in what was claimed to be the largest hole in Briatin - a vast slate quarry in Cornwall.

Did anyone else notice that beautiful collection of Geological Survey Maps on display in a nearby corridor?

Do you think Fred Hoyle might remain in a "steady state" at the sight of archaeopterix in the Solnhofen Limestone? Sorry about this little piece of mischief for I do believe him to be one of the few great original thinkers of today - even though he occasionally gets it horribly wrong!

Down to terra firma with the warm words of Professor Hawkes to the department's alumni (none of whom go back as far as the Pleistocene!) and to our Society members. We thank him, and Doctor Smith, very much for allowing us this visit.

Why do I always overeat when there is a buffet? It must be testimony to the excellence of the lunch provided - certainly not my greed!

GORDON HENSMAN

Meeting held on Monday 29th March 1993

"GOLD" and "DINOSAUR" - two words dear to a geologist's heart, and both mentioned in the lively and informative lecture given by Dr. Frank Ince of the Russell Society.

Dr. Ince's subject was "THE GEOLOGY AND MINERALOGY OF LEICESTERSHIRE". He opened by saying that his talk could be considered as an introduction and background to the proposed field trip that he will be leading later this year to some of the areas under discussion.

The lecture was well illustrated by slides, the first of which was the POSTCARD MAP familiar to all O.U. Geology students. From this Dr. Ince pointed out that the general geology of the British Isles outcrops SW-NE roughly parallel from the Channel to the North Sea.

Leicestershire lies very near the centre of England and includes a large part of the Central Plateau formed of Trias and Lower Lias. Pre-Cambrian Rocks of Charnwood Forest region consist of a thick mass of tuff with overlying grits and shales and are overlaid by drift deposits of boulder clay.

Several types of igneous masses have been intruded into these rocks - at Markfield Bradgate and Craft, diorite or quartz-diorite; at Mountsorrell granodiorite and at Whitwick porphyritic dacite.

Dr. Ince explained that this area formed a plunging anticline with its major axis NW-SE. A slide of an O.U. model illustrated this point.

The Pre-Cambrian era was one of great volcanic activity. Vast flows of lava poured from sub-aerial volcanoes and large quantities of volcanic detritus were ejected. Portions of this land sank below sea-level and material from volcanic products spread out in more or less stratified beds. This point was pictured on a slide showing the Mount St. Helens eruption, the mountain issuing forth dense black clouds of pyroclastic material which we could imagine settling on comparatively still waters and sinking to the bottom. The Pre-Cambrian rocks are covered by desert deposits of the Trias. At this time crystals of sodium chloride were formed. These were subsequently covered by insoluble material. During the passage of time the NaCl dissolved away and its place was taken by dolomite forming pseudomorphic "crystals". Dr. Ince showed a slide to illustrate the result of this process and followed that with several slides that gave us a good idea of the very diverse mineralogy of Leicestershire. Two slides that were not of minerals were ripple-bedding and a DINOSAUR'S FOOTPRINT in Triassic marl.

The next set of slides depicted the area that we shall visit in July. Most of the quarries are now being worked for roadstone, digging down to the hard volcanic rock. Dr. Ince raised out hopes by telling us there was GOLD in them thar hills but dashed them again by saying that it was (a) spoken for and (b) so microscopic that we would be unlikely to spot it. We were also shown a slide of a diagram of a sulphide vein topped with a GOSSAN or IRON HAT.

In answer to a question Dr. Ince said that there was no indication of placer deposits in the area.

It was exciting to see the excellent display of hand specimens that Dr. Ince had laid out for our inspection. From the Craft quarry there were examples of marcasite on calcite and marcasite on calcite on ANALCIME, a sodium zeolite. The other zeolite on display was the calcium salt LAUMONTITE.

There were several specimens that showed the marked copper mineralisation of the area: malachite on aragonite from Bardon Hill, native copper, malachite and cuprite together, from the same place, and a sample of AZURITE.

The original of the slide of the NaCl dolomite was on show and a specimen of the sinisterly named uraniferous mineral COFFINITE from the Gypsy Lane Brick pit. Buddon Wood was represented by a specimen of GOETHITE, which may have formed part of a gossan.

Althogether the lecture, the slides and the specimens made a most interesting and enjoyable evening. I am sure we are all looking forward to July.

BARBARA S. RUSSELL

ITEMS IN BRIEF

1. Welcome to new members

Karen James - Castle Vale
Anna Browning - Warley
peter Worrall - Kidderminster
Heidi Howell - Oldbury
Dr. Peter Bent - Bilston
Lance Payne - Wombourne
David Price & family - Kidderminster
Roger Bennett & family - Harborne

2. Best wishes to Paul Shilston for a long and happy retirement (my only concern is that the Society will suffer from a reduced service as Paul finds himself busier than ever). The Society owes a great debt to the efficiency, professionalism and foresight that Paul brings to his post as Secretary.

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BLACK COUNTRY GEOLOGICAL SOCIETY

CANAL TRIP WITH OPTIONAL MEAL. SATURDAY 30th OCTOBER 1993.

DUDLEY CANAL TUNNEL, at 3172 yards (1.8 miles) the longest in Britain, was opened in 1792 and was in use for many years. Just over ten years ago it became unsafe and was closed to traffic in 1981.

It has now been repaired at a cost of £1 million, and was opened again on the 200th anniversary of its original opening, in June 1992.

This BCGS SPECIAL CHARTER TRIP will traverse the length of the tunnel, with a historical and geological commentary. The canal barge will also visit the spectacular limestone workings of Singing Cavern, and Little Tess cavern, each with an audio-visual display.

Afterwards there will be an (optional) meal at Mad O'Rourkes, a 'character' pub which has been furnished with many Black Country mementoes, and which is opening early specially for us.

THE TRIP IS OPEN TO ALL MEMBERS AND THEIR FAMILIES AND FRIENDS.

ARRANGEMENTS FOR THE TRIP.

Assemble at 2.15pm at Mad O'Rourkes Pie Factory carpark (corner of Sedgley Road West and Hurst Lane, Tipton. Grid ref: 948925). This is about half a mile north of the Black Country Museum.

Leave cars there, and travel by private bus to the far end of the tunnel, at Parkhead Locks, Netherton.

Travel by barge through Dudley Tunnel, into Singing Cavern and Little Tess cavern, then past the Black Country Museum, to Malthouse Stables Wharf near Mad O'Rourkes, where we disembark at about 4.45pm.

ARRANGEMENTS FOR THE MEAL.

A meal will be laid on at Mad O'Rourkes at 5pm for those who have booked. There is a choice of menu which must be indicated on the booking slip below.

WARNING - the Desperate Dan Pie and the Allotment Pie are described as "very large"

BLACK COUNTRY GEOL SOCIETY BOOKING SLIP FOR CANAL TRIP & MEAL. 30th OCTOBER 1993

Please enter in the boxes the number of items required.

PRICES : Canal trip : adults 13 & over - £5.
children 5-12 - £3.
children under 5 - free.

Mad O'Rourkes - main meal £4.75
" - dessert £1.75

CANAL TRIP		MAIN MEALS		DESSERTS	
Adult	☐	Desperate Dan Pie	☐	Jam roly-poly & custard	☐
Child 5-12	☐	Cradley Porker sausages	☐	Mad O'Rourkes mud pie	☐
Under 5	☐	Chicken Ham & sweetcorn pie	☐	Apple strudel & cream	☐
		Allotment pie (vegetarian)	☐		
		Vegetable lasagne	☐		

I enclose a cheque (payable to Black Country Geological Society) for £.....

NAME(S).....

Please return to :
Mrs.J.Shilston, 16 St.Nicolas Gardens, Kings Norton, Birmingham B38 8TW.