

# THE BLACK COUNTRY GEOLOGICAL SOCIETY

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## Editorial

Many thanks are due to all the people who so willingly helped me to prepare my first attempt at editing anything. While I considered the best tactics for extracting contributions for the newsletter without being accused of nagging, members' response exceeded all possible hopes. One member even used a first class stamp to add to his promptness, and it was never intended to drive people to such extremes.

It would be appreciated if members, especially the newer ones, would let me know what type of event they would like to write about so that contributions can come from as many people as possible. Articles like those by Peter Whitehead and Graham Hickman are very welcome. With the current amount of help, all I had to worry about was the typing.

**FEBRUARY 15th** "Pleistocene Palaeontology - Dating by Beetles".  
Lecture by Dr. Keith Moseley of Birmingham University.

Dudley Museum at 7.45pm.  
Coffee and biscuits at 7.15pm.

**MARCH 15th** Sherry and film night with Annual General Meeting.  
Dudley Museum at 7.30pm.

**APRIL 12th** Informal meeting to discuss Pleistocene geology with reference to the next field trip.  
Dudley Library at 7.45pm.

**APRIL 22nd** Field trip to look at some Pleistocene deposits of the Midlands. Leader Professor Shotton.  
Coach leaves Dudley Library 9.30am.

## Future Programme notes.

**May 10th** Informal meeting to discuss Dorset geology for the next field trip.

**May 18th, 19th, 20th** Weekend field trip to Dorset, with leaders from Southampton University.

**June 7th** Informal meeting to discuss the next field trip.

**June 10th** "Igneous Rocks of the Peak District". Field trip, leader Dr. R. Ixer of Aston University. Departure 9am.

**July 12th** Conservation of geological sites in the Black Country. Discussion of progress up to the present.

**July 15th** Sites for conservation. Field trip to sites of interest to the Society. 10am start.

**September 27th** "The Geology of the Dumfries area". Lecture by Graham Hickman.

**October 11th** Informal meeting to discuss the next field trip.

**October 14th** "The Manifold Valley" Field trip, leader Peter Whitehead.

**November 16th** Social Evening.

**December 13th** "Mineralisation". Lecture by Dr. Barnes of Swansea University.

Please note that there are changes.

Indoor meetings are at 7.45pm. with coffee and biscuits at 7.15pm.

Non-members are welcome at all meetings.

The field trip to the igneous rocks of the Black Country & Wyre Forest had to be postponed due to fog and ice. It will now be held on :-

Sunday 4th. March, leaving Dudley Central Library at 10am.

## RECENT EVENTS

September 21st.

The Geological Resurvey of Telford New Town by Dr. R. Hamblin of the Institute of Geological Sciences.

Dr. Hamblin gave a very detailed description of the mapping on a scale of 1:25000 of Telford New Town. The succession in the area ranges from Precambrian volcanics to Quaternary deposits.

Precambrian rhyolites, tuffs and ashes are overlain by shallow water quartzites, glauconitic fossiliferous Comley sandstones and Shineton shales. The Ordovician is absent, unless represented by an intrusion, and the Silurian is present as Wenlock Limestone.

The Carboniferous lies unconformably on the Silurian and includes the Drybrook Sandstone and extrusive basalts. The coal seams are more numerous and more widely separated than in the Black Country. The Coal Measures contain fireclays and easily smelted siderites. High in the Coalport deltaic sandstones are intermittent red beds representing semi-desert conditions. The source of tor in the Coalport beds is thought to be the Silurian or Lower Carboniferous rocks. Any lighter oils have presumably evaporated.

The Keele beds with their high calcium carbonate content and red strata indicate increasing desiccation, though purple, red and green micaceous beds were laid down in rivers or temporary lakes. The Keele sandstones tend to give rise to minor rotational slips. The Enville beds, with massive red sandstones, continue the story of increasing drought. The conglomerates within the Enville beds contain cherts and limestones and must have a different source area and possibly a different age from those of the type area. No dating techniques are available.

Mining History has had an influence on the form of Telford New Town. The

town centre is built where the Upper Coal Measures overlie large deep coal mines. Developments must avoid major faults and shallow workings. If mines are very near the surface, areas can be fully reclaimed after opencast mining.

The Permo-Triassic includes wind blown dunes and coarser water-laid deposits. These provide Telford with its water supply.

The basic sequence of Quaternary rocks is Lower Boulder Clay, sand and Upper Boulder Clay. The sands are very pure, flat lying lake deposits. The Upper Boulder Clay is Devensian in age, a hard dark brown clay with much local source material but including Lake District and Scottish granites. The top layers often contain more varied material as the glaciers had then cut deeper and tapped a greater sequence of rocks. Doubt was thrown on the widely accepted explanation of the Ironbridge Gorge as a glacial overflow channel, since the Buildwas sands at the entrance to the channel are not lake sands but were laid down in fast flowing streams, perhaps subglacially.

The whole lecture was liberally illustrated with slides, and we came away with a clearer picture of the complexities and implications of geological mapping. K. A.

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October 12th.

Informal meeting. Peter Whitehead led a discussion on the geology of the Church Stretton area, with reference to the next field trip. Despite very short notice, he made the evening thoroughly informative and very enjoyable also.

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October 15th.

Field trip to the Welsh borderlands. Leader, Dr. P. Toghill.

Our latest field trip to the Welsh borders was centred on the Church Stretton area, and proved to be

rather popular. A party of 76 gathered in Cardingmill Valley to begin the day's studies of Pre-Cambrian and Ordovician rocks.

The Pre-Cambrian Longmyndian sedimentary rocks outcrop to the west of the Church Stretton fault complex. They are considered to be shallow water deposits and due to the absence of fossils are grouped on lithological characteristics. They have been considerably disturbed and folded into a deep syncline trending NNE - SSW. We examined rocks in the eastern limb of the syncline.

The first location in the valley was at the Cardingmill Grit, a marker horizon between the Burway and Synalds Groups. The greenish grey sandstone had three directions of parting and the orientation of mica flakes helped to locate the dip, which was  $70^{\circ}$  to WNW.

Next came the Synalds Group with silty shales and sandstones, with a change of colour to purple due to a high content of ferrous oxides, and again the dip was  $70^{\circ}$ . Small cores had been taken from the rocks for palaeomagnetic observations with the interesting results that the rocks had been deposited at  $50^{\circ}$  to  $60^{\circ}$  S. ( $\tan. \text{magnetic inclination} = 2. \tan. \text{latitude}$ ). Evidence of the beginning of regional metamorphism was seen in a side valley, with diagonal cleavage planes occurring in the shales, but only occasional fractures were seen in the harder alternating sandstones.

Back in the main valley, it was a steep but rewarding climb to see the principal evidence of shallow water deposition. Ripple marks, rainpits and sun cracks suggested intertidal conditions. Above were Latch Volcanics with their bleached rhyolitic tuffs, still part of the Synalds Group.

We finished the morning by driving to All Stretton to observe a quarry conveniently situated behind the Yew Tree Inn. The quarry contained outcrops of the oldest Longmyndian rocks, the Stretton Shale Group, and showed its contact with the overlying Luxton Rock.

An interesting problem of 'way-up' was posed as both rocks dipped vertically.

After lunch we crossed the Church Stretton fault and travelled east to Soudley Quarry to examine Ordovician outcrops of the Caradoc Series. The quarry was once the source of local building stones. At the top of the quarry were the Cheney Longville Flags and alternata Limestone, and at the bottom the Chatwall Sandstone. The scree proved to be a good hunting ground for fossils and several good cephalons and pygidiums were found, possibly of *Troeggerolithus* and *Kloucekia apiculata*, and many brachiopods such as *Heterorthis alternata*.

Hazler quarry was then visited. Its unique Ordovician neptunian dykes in Pre-Cambrian Uriconian Volcanics were most impressive, but failed to produce any fossils. The quarry was also the cause of much discussion about the basaltic ashes and lavas, and thin sections would have helped.

There followed a brisk climb to Ragleth Hill where the misty weather restricted the view, although the features associated with the Church Stretton valley and the Church Stretton fault were seen. A most impressive result of the faulting is the outlier (Wenlock Limestone) forming a hillock (and irregularly west of Caer Caradoc, with a down-throw to the west of 1000m).

Our day ended by the side of Church Stretton road at Hope Bowdler, to observe the unconformity of Ordovician Larnage Shales resting upon Pre-Cambrian Uriconian Volcanics. The ostracod *Tallinella scripta* was found in the shales just by the road. A notice board has been erected on the site of the unconformity by the Shropshire Conservation Trust. It points out the features and importance of the site. Perhaps some time in the future our Society may become engaged upon similar schemes for the benefit of the public. Conservation is greatly stressed in Shropshire and the use of hambers was allowed only in the three disused quarries that we visited.

Dr. Toghill coped remarkably well with such a large party. We thanked him and left for home at 17.30. With much more interesting geology within the Welsh Borders, a further field trip to the area seems a logical follow-up to this visit. C.M.

November 17th.

### Social Evening.

The Society's social evening, held during the bread strike with its long queues of anxious faces anywhere bread was to be found, could have been a delight for the calorie counters only. Not so, since the committee had chosen well in having Caitland and Ellen Woods as the organisers. With a little family help in both production and preparation, they managed to make a feast of such proportions as to fill any geologist's bottomless pit. Delicious French sticks and rolls bursting with goodness elegantly graced the table. Our thanks must go to Ellen for making the evening so successful.

The Old Mill provided a cosy and welcoming venue for many old faces and an encouraging number of new ones to meet in. The social evening is an important one for the Society, both as a fund raiser and for fostering friendship between members and their families. Members of families left at home either from choice or necessity when the Society meets, have an opportunity of feeling part of the Society and of being able to share in new friendships.

The generously donated gifts for the raffle caused an unexpected rush for tickets, but the quick thinking treasurer made a speedy revaluation of ticket price and kept everyone happy. L.C.

December 7th.

### Mining in the Black Country by speakers from the Black Country Museum Mining Group.

This was a friendly meeting which attracted far more non-members than members. Alan Ballman described the work of the Black Country Museum Mining Group since its formation in 1970 in recording and conserving all aspects of mining, before introducing his team of speakers.

His first star turn was Charles Bennett, who had the advantage of having lived through a considerable slice of mining history. He described personal reminiscences of mining between 1910 and 1950 with graphic realism. He told us useful things about gin pits, beam engines, pillar and stall working, and the art of leading drunken miners to work.

Rigel Chapman described his particular interest in producing architectural plans of pithead buildings. In many cases the buildings were on the point of collapse or demolition, and their layout could have been lost for ever.

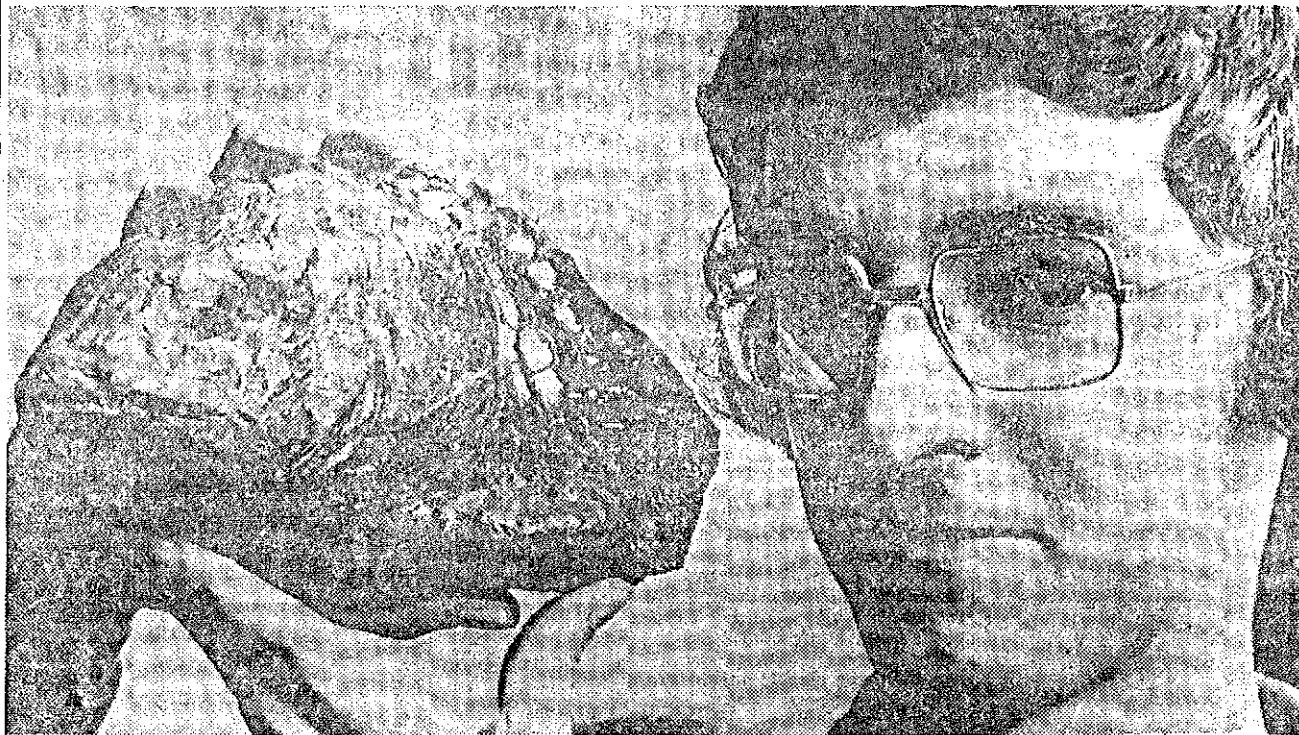
Victor Smallshire took us on an illustrated trip through canals and tunnels, in the Ludley limestone mines. He showed us what must be a unique selection of slides.

Colin Knipe completed the quintet with a talk on old mineshafts and their treatment, leaving us quite clear what to do if any more holes appear in the Birmingham New Road. G.B.

### THE FIRST TERM AT UNIVERSITY

by Graham Hickman.

For the next three years I shall be reading for a degree in 'Geology with Geophysics' at Leicester University. Leicester is geographically very



## Fossil found — again

Museum workers have rediscovered a 350-million-year-old fish fossil.

They made the find during removal work at Dudley central art gallery.

Dudley's famous fossil collection is being moved from cellars below the gallery to geological show cases in the building. The collection has been suffering because the cellars are too cold and damp.

The fossil is of an early lobed fin type fish and is very rare.

"We stumbled across this remarkably good specimen while moving the collection. It is a number of discoveries," said geological museum assistant, Mr Graham Hickman, who is pictured with the find.

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## Holiday with fossils

An 18-year-old Wolverhampton student holds the future of Dudley's world-famous fossil collection in his hands.

Graham Hickman, of Rowan Crescent, is a committee member of the Black Country Geological Society, and is spending the summer working on the fossil collection.

Later this year he is going to university to study geology.

The Dudley fossil collection includes specimens from all over the world, but thousands of items are stored in the central museum cellar and are being attacked by damp.

Graham said today: "There is no doubt that they are rotting, and there is nothing that can be done with some of them."

"Ideally they should be moved out of the cellar."

At the end of his stint at Dudley, Graham will help formulate recommendations on how best to preserve the collection.

central and neither too near nor too far from home. This not only enables me to keep up my links with the BGS, but also makes for new acquaintances with more distant geological societies such as the East Midlands Geological Society and the Leicester Literary and Philosophical Society (Geology Section).

The first year course is two thirds geology and one third physics. The geology part is divided into two sets of lectures, one in general geology and one in more specialized topics which are not taught at 'A' level. These include statistical analysis of geological data, and computing. Geophysicists rely on both of these for interpreting readings from seismic surveys, where the quantity of data is too great to be dealt with by any other method.

The physics is quite a contrast, in that the level of work is much more advanced and one is expected to have an excellent comprehension of 'A' level physics.

The geology field trips seem very rushed and overcrowded with students, but this will soon improve since students taking geology as their supplementary subject need to come on only one more field trip.

### THE CONSERVATION COLUMN.

by Colin Mitchell.

The Conservation Group intend to keep members informed of our progress. At present most of our time is spent on sites threatened by the massive Derelict Land Reclamation programme which has begun. The West Midlands County Council and the Metropolitan Borough Councils of Dudley, Sandwell and Birmingham have been asked by the Society to conserve various exposures. They have all stated their willingness to help us, and also to keep us informed of their future schemes.

#### Handsworth - Swan Village Walkway.

The old Snow Hill to Wolverhampton Low Level railway is to become a public walkway. Our interest is at West Bromwich where the railway line is in a cutting where outcrops of the Keele Beds occur. The County Planner

will conserve those exposures which we have as important. Work will be carried out on clearing exposures and improving accessibility.

#### Cotwall End Tip.

After the damaging of the Coal Measures exposure, a site meeting was held with Dudley Leisure and Recreation Services. The importance of the site was pointed out, and we now have an assurance that the exposure will be conserved.

#### Rough Hill Quarry.

The County Planner and Sandwell M.L. Planner have assured us that plenty of the dolerite exposure will remain after tipping has been completed. The quarry has good examples of spheroidal weathering and columnar jointing.

#### Gueslet Sand and Gravel Quarries, Great Barr.

The Nature Conservancy Council share our concern about this site, where tipping may take place. We are interested in the exposures of Hunter Pebble Beds and their associated sedimentary structures. The Department of Geological Sciences at the University of Birmingham is now actively considering this site as part of its undergraduate teaching programme, a result of its being listed in our list of geological sites.

Various other sites, including those at Baginbidge Colliery and New Rowley Road, Actonter are at present being investigated.

The response to the call for geological sites throughout the area has been excellent. Brief details of 63 sites are included on the enclosed list, and more have been promised. We hope to circulate the list to all interested parties. Each site has been visited, its importance evaluated, and detailed information recorded.

The Conservation Group would be pleased to have assistance with the visiting and recording of sites, which usually takes place on Sunday mornings. Please contact **Peter Parkes, Sedgeley 75895** or **Colin Mitchell, 021-353-4083**.

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