The Black Country Geological Society

NEWSLETTER NO.25 - FEBRUARY 1981.

Editorial

In this issue is the first of a new series describing local sites of interest. This one is the Lye site recently cleared by a working party from the Society. It is intended to describe one in each issue, and they will be on a single page so that it is possible to collect them separately from the rest of the newsletter.

In March the time will come again for the annual general meeting, but as this will occupy only a small part of the evening, the meeting will be a good opportunity for a pleasant conversation over a glass of sherry with old friends and new ones. If the conversation should lead to a suggestion about the Society, it would of course be welcome. Anyone feeling shy about speaking could easily mention a point to a committee member. The last part of the evening will be devoted to two films, which at the moment are being carefully selected from a large number of possibilities.

Forthcoming Meetings.

February 23rd Monday. "Black Country Mining Geology". Mr. Basil Poole will give a talk on aspects of mine engineering and surveying, and this is likely to include the lighter side of his lifetime's experiences in this work. He is a well known authority on the Black Country area and its mining problems.

March 16th Monday. Sherry Reception. This will be followed by a short annual general meeting, then the rest of the evening will include two films.

Meetings are held at the Allied Centre, Green Man Entry, off Tower Street, Dudley. (behind Malt Shovel pub) Indoor meetings will commence promptly at 8 pm. with coffee and biscuits from 7.15 pm.

Non-members welcome.

To members and visitors on field trips:-
The Society does not provide personal accident insurance cover for members or visitors on field trips. You are strongly urged to take out your own personal accident insurance cover to the level which you feel appropriate. Schools and other bodies attending field trips should arrange their own insurance cover as a matter of course.

Future Programme.

April 12th Sunday. Field trip to the Malvern Hills. Leader Mr.Stuart McNicol from the Department of Geology, Wolverhampton Polytechnic. This meeting will concentrate on the Silurian in preference to the Malvernian. The itinerary will include Hereford. Beacon, Gullet Quarry, Hollybush Hill, and other exposures towards Ledbury. Departure from Allied Centre at 10 am. and from British Camp at 11 am.

May 15th - 17th.(Please note that the date had to be changed) Weekend field trip to North Wales based on Dolgellau. Leader Mr. Denis Bates of Aberystwyth University. Because of the change, details of hotel and itinerary are not quite ready, and members needing details before the next newsletter are asked to contact Paul Shilston (021-459-3603)

May 18th Monday. Members' Night. Several short talks, expected to include some volcanic landscapes.

June 14th Sunday.Field trip to the Cotswolds.

June 29th Monday. Evening field trip to a site of local interest led by Alan Cutler.

July 12th Sunday. Visits to Chatterly Whitfield Mining Museum and to the Gladstone Pottery Museum. There will be a coach if there is sufficient demand.

Committee Meetings:- All at 8 pm.

General	Conservation
March 2.	March 30.
April 13.	April 27.
June 22.	July 13.
Sept. 7.	Sept. 28.
Nov. 9.	Nov. 23.

Field Trip to the Wrekin.

Oct. 5th.1980. Leader Mr.A. Jenkinson.

About 30 members met in Forest Glen car park, conveniently situated within the first quarry to be studied. It is in Uriconium volcanic sediments of late Precambrian age, probably about 1000 m.y. old. Their origin is unknown. The sequence of beds within the quarry dips N. towards the back of the quarry, into Lawrence Hill. The axis of the Precambrian volcanics is NE-SW and the rocks are mostly pyroclastics, ranging from ashes to agglomerates, some with the bombs weathered out. Near the top of the quarry is a lava flow, topped by more bedded ashes. Near the road, on each side of the quarry is a dolerite dyke. This is intruded into a fault plane which shows slickensides and brecciation of the country rock, with some quartz veining.

A mile away round the hill, a second stop was made at a working quarry in the rhyolite lava which forms the main part of the hill. Depending on the state of quarry working, this quarry shows the unconformity at the Wrekin fault, but we were unlucky since spoil covered it. Several fault planes are involved in this area, and Wrekin quartzite is being quarried on the far side. Basal conglomerates containing rhyolites and green chloritic volcanic pebbles, and flow banded rhyolites, produced many appreciative remarks for their sheer beauty as well as their geology. The extent of the dolerite dyke in the centre of the quarry face was studied, and the sequence and dyke were the same as over the hill in Forest Glen.

Across the track could be seen the next quarry, immediately beyond the unconformity. A high cliff of huge beds of Wrekin quartzite and a fault plane faced us at the back of this quarry, beyond which was Granophyre. The Wrekin quartzite was displaced a little to the east, showing polished white slickensides. The thin profile of a leached podsol soil was seen on top.

Lunch was taken in the nearby fourth quarry. An extensive exposure of ripplemarks, dipping at about 35 degrees, extended for most of the cliff on one side, with other layers below it like the pages of a book. Once again we marvelled at the enormity of natural features on which our insignificant selves perched with sandwiches. The sediments showed upward fining in many beds, some starting with a basal conglomerate and ending with sediments too fine to see with the naked eye.

The Wrekin quartzite is Basal Cambrian, and Middle Cambrian sediments are not exposed. We crossed a steep wooded valley to Maddocks Hill, which is flanked by Shineton Shales of the Upper Cambrian. Maddocks Hill is formed by an intrusion of Camptonite, 90 yards by two miles, and of unknown depth. It might appear to be a dyke, but as the Shineton Shales dip vertically here, it is probably a sill. It makes excellent roadstone.

At the entrance to the quarry, the grey Shineton Shales were studied especially for the early graptolite Dictyonema flabelliforme, but none was found. Again the snags of a working quarry were demonstrated, since rock had been dumped on a known fossiliferous outcrop.

Contact metamorphism was observed near the shales-Camptonite junction. The grain of the Camptonite was fine, flinty or even glassy there, but increased in grain size over the next few inches.

Camptonite is a plutonic rock of the lamprophyre group, named after the Campton Falls of New Hampshire, U.S.A. Lamprophyres are usually found as dyke rocks, containing ferromagnesian minerals as dark micas, augite, hornblende and olivines, in various stages of late metamorphic alteration. Feldspars vary with the sub-group, and there is no quartz. They represent unusual, highly specialised magma fractions. Camptonite is a type which contains plagioclase, albite, or orthoclase, and at least augite and hornblende. The lack of quartz increases the dark appearance of the rock, and the colour ranged from deep pink to almost black, but with no obvious distribution change around the extensive quarry.

Further along the track, a very overgrown linear depression represented the Carboniferous Limestone outcrop, which had been quarried for about two miles towards Little Wenlock. The rock could hardly be seen, except in one depression which resembled a natural swallow hole. Coal mines had existed a couple of fields away to the east, and an occasional limestone adit had been worked below the coal measures there. The limestone is sandy, representing a shore deposit of the St.George's Land Massif, and more akin to the Pennine type than to that of Titterstone Clee or the Forest of Dean.

The day was spent entirely on foot, and members were most grateful to Andrew Jenkinson for the interest and enjoyment which he gave. S.P.

Success Story

Margaret Oliver, who is a founder member of the Society and was also one of the original committee members, has obtained her Qualifying M.Sc.from Birmingham University. This was in December, and she has decided to proceed towards her Ph.D. She originally graduated from Bristol University.

Anyone who has attempted to arrange years of serious academic study around their other commitments in life, will appreciate the extent of the determination, stamina, and family support which is required in addition to the necessary ability.

We send her many congratulations, and very best wishes for the second stage of her research.

Book advertisment:-

"Natural History of Fossils" by Chris Paul. Part of the World Naturalist Series of Weidenfeld Publishers Ltd. The paperback version of this book costs £6.95. It has been offered to the Society at a reduced bulk rate if at least 10 are ordered - but it must be sold at the full rate. The profit would go to the Society funds. The book includes studies of fossil associations, faunal provinces and succession, the origin of life, rock dating, past climates, and astronomical theories. Please contact Paul Shilston.

Geological Society of London

A letter has been received from Dr.P.Toghill, who is secretary of its Conservation Committee, with regard to the co-ordination of conservation matters on a national basis, as well as to promote site documentation. Colin Mitchell will represent B.C.G.S.

Further Geological Holidays.

1. Bristol University Extra-mural 32 Tyndall's Park Road, Bristol BS8 2HR.

   a) Cancel Naples Visit - substitute June/July field course in Iceland.
   b) Practical stratigraphical correlation techniques. County Museum,Dorchester. Non-resident.March 13-17.£4.50
   c) Geological studies in Somerset and Dorset,Dillington House College.May 1-3.£29.50.
   d) Old Red Sandstone Geology of S.Pembrokshire.Based at Tenby.Feb.20-22.£3.60 plus accommodation.
   e) Lake District.Based at Keswick. May 8-11.£6 plus accom.
   f) Dingle.S.W.Ireland.Oct.15-20. No cost stated.

2. Phillips Tutorials Frogs Gutter, The Bog, Minsterley,Shropshire. Geological Holidays.Res.in hotel, or non-res.Tuition or not.

   April 5-10.July 19-24. Aug.30-Sep.4. Nov.1-6.

3. Losehill Hall,Castleton Derbyshire S30 2WB(Peak National Park Centre)

   Mines of the Peak District March 6-8 £39.50.

4. Flatford Mill Field Centre East Bergholt, Colchester,Essex,CO7 6UL.

   a) Coral Reefs in the Red Sea Elat, Israel.May 16-30.
   b) Icelandic Landscape.Two weeks in Iceland.July 30-Aug.13.

5. University of St.Andrews, 3,St.Mary's Place, St.Andrews, Scotland.KY16 9UY.(Mrs.Balfour)

   a) Reading rocks - geology for beginners.Lectures, lab.work, films, field trips. July 25-Aug.1.
   b) Field study,Scottish Highlands, advanced course. July 11-18. Ullapool, Ballachulish, St.Andrews.

BLACK COUNTRY GEOLOGICAL SOCIETY.

Notice is hereby given that the sixth Annual General Meeting will be held on Monday 16th.March 1981 at 8pm in the Allied Centre, Green Man Entry, off Tower Street, Dudley.

AGENDA.

1. Apologies for absence.
2. Minutes of the AGM held on 6th.March 1980.
3. Statement of Accounts and Treasurer's report.
4. Annual report.
5. Election of Officers and Committee.
   - (a) Chairman.
   - (b) Vice chairman.
   - (c) Hon.Treasurer.
   - (d) Hon.Secretary.
   - (e) Conservation Secretary.
   - (f) Field Secretary.
   - (g) Three committee members.
   - (h) Hon. Auditor.
6. Proposal to increase the annual subscription as recommended by the Committee.
7. Any other business.

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The retiring officers and committee are :-

Chairman	A Cutler
Vice chairman	Dr P G Oliver
Hon. Secretary	P D Shilston
Hon. Treasurer	M J Woods
Conservation Secretary	C Mitchell
Field Secretary	T O'Mara
Committee Members	J Easter
	Mrs A.Harrison
	D L Reynolds

Editor:- Sheila Pitts, 4 Siskin Road, Pedmore, Stourbridge, West Midlands, DY9 7HU.

FILM NIGHT: We hope to hire the B.B.C "Horizon" Film of the 1980 Mount St.Helens eruption in North America for our Film Night. Failing this the likely topic is Marine Oil Exploration and Production from the Shell Film Library.

LOCAL GEOLOGICAL SITES.

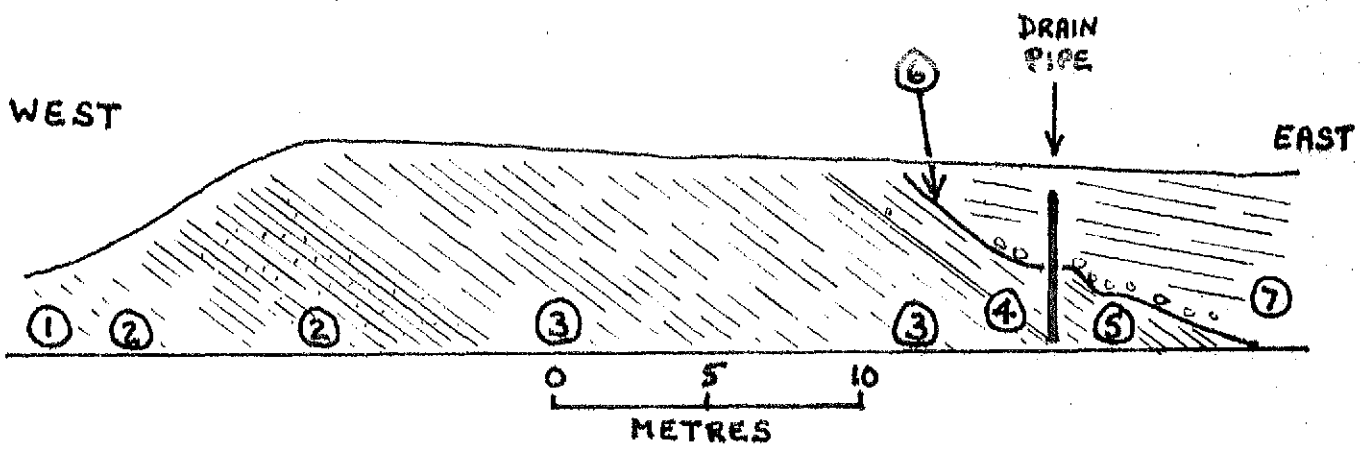
This is the first of a series of notes on local geological exposures that will be featured in forthcoming newsletters - why not collect them for future reference ?

This exposure was recently cleared by Society members, so it can now be clearly seen.

1. THE HAYES CUTTING, LYE.

Grid Ref: SO 930 845.

Location: on the north side of High Street, Lye, 100 metres west of the junction with Hayes Lane.



1. Lower Ludlow Shales
2. Aymestry Limestone
3. Upper Ludlow Shales
4. Ludlow Bone Bed
5. Downton Castle Sandstone
6. UNCONFORMITY
7. Coal Measures

Description: The lower strata seen in the exposure are in the Ludlow series of the Silurian, comprising Lower Ludlow Shales, Aymestry Limestone, and Upper Ludlow Shales. They were formed in a shallow offshore marine environment - the "Shelf Sea".

These are followed conformably by the Devonian strata (Downtonian Series) of the Ludlow Bone Bed and the Downton Castle Sandstone, which were laid down under deltaic freshwater conditions from erosion of land to the north.

There is then an unconformity, followed by conglomerate and sandstone of Coal Measure age. Immediately above the unconformity the conglomerate includes fragments of Lower Carboniferous rocks, their large size indicating that they were derived from erosion occurring locally.